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A HISTORY OF ARCHITECTURE

A HISTORY OF ARCHITECTURE

VOLUMES I AND II

BY

RUSSELL STURGIS, A.M., PH.D.

VOLUME III

BY

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VOLUME III—GOTHIC IN ITALY FRANCE AND NORTHERN EUROPE

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PUBLISHER'S NOTE

AS "A History of Architecture" was originally planned there were to have been three volumes; the first and second covering the architectural forms before the coming of Gothic, leaving to the third volume Gothic, the Renaissance and more recent developments. After a large part of this last volume had been written and was ready for press, however, it was found that Mr. Frothingham, who had undertaken the work after Mr. Sturgis's death, had so much important material that it seemed advisable to divide his work into two parts. As now issued Volume III covers Gothic in France, Italy, Northern and Southern Europe; and Volume IV Gothic in Great Britain, the Renaissance throughout Europe, and the modern forms. Unfortunately, the book had progressed so far before this change became necessary that it was impossible to alter the numbering of the illustrations and still publish the volumes when planned; therefore the original system has had to be retained, and as these volumes are now issued figures 1–873 run through the two final volumes. To facilitate reference the volume number is prefixed wherever the figure referred to is in the other volume.

The long delay in publishing the two final volumes is due to the death of Mr. Sturgis, shortly before the completion of the second volume. For, on Mr. Frothingham's undertaking the completion of the work, the preparatory study for the last volume which Mr. Sturgis had made had to be done over again. As they are finally issued these two volumes go into the study of Gothic and Renaissance forms in far more detail than would have been possible under Mr. Sturgis's original plan, and it is hoped that they will therefore be of more importance than if the author had been more limited in his discussion.

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INTRODUCTION

IN the preparation of these concluding volumes I feel that I am assuming a somewhat complicated responsibility. Mr. Sturgis had left no manuscript covering any part of it, nor any memoranda that could be used; neither had he outlined its plan. I had no means of knowing at what time he proposed to close the historic survey, and whether he planned to include the antecedents of contemporary architecture. More than this, as he left the closing part of Volume II. unfinished and incomplete, there are some gaps in the treatment of Romanesque architecture that must be reckoned with—such as that of Spain and the Lombard monuments of Apulia—and there is the obvious need of a summing up of the Romanesque movement and of the conditions that led to the opening of the Gothic age. From a long intimacy with him, and thorough familiarity and sympathy with his work, it is easy for me to imagine what he would have liked to write. In the few pages of my preface to the Gothic movement it was not feasible for me to do more than outline this probable synopsis of Mr. Sturgis.

Of course, it is not possible nor desirable for one writer to attempt to lose his identity in that of another; so I have not been guilty of any mechanical imitation of Mr. Sturgis' style or method. Still, I conceived it not only right but artistically advisable to sink personal preferences as to arrangement and treatment in order to follow what I fancy would have been Mr. Sturgis' scheme, at least in its general lines. I have, in particular, followed his plan of making the bulk of the text consist of descriptive details based on the illustrations, so that everything pivots on these illustrations, though I can hardly hope to have accomplished this with a felicity equal to his. In the general stylistic and historic considerations where this was not possible, I have given illustrations to cover every important statement. In doing this I have borne in mind that Mr. Sturgis was not only a practical architect, but addressed himself largely in this book to an audience of architects.

In following the same policy I may have become at times even somewhat more addicted to technical descriptions.

Consequently, under these conditions I have reduced to a minimum, both as a matter of policy and from space requirements, the correlation of architectural development with the rest of contemporary civilization,—political, social, intellectual and religious. I have given of such material only what was absolutely necessary in its suggestiveness as an explanation of the wherefore of certain architectural forms, historic phases, or stylistic connections. For example, the fact that the fundamental differences between the ground-plans of the English and the French cathedrals, which have such important artistic consequences, are due to liturgical differences in worship: the fact that the architectural barrenness of France in the Fourteenth century and her subsequent adoption of the Flamboyant style, was due to the English conquests and supremacy in France. My personal bias is toward a considerable development of these aspects of the subject. It seems only logical to refer to the cause when studying the effect. It is impossible to segregate works of art from the rest of medieval life, as it is more possible to do for modern times. Nobody can understand the wherefore of the thousands of figures on a Gothic cathedral who does not know something of medieval thought, belief and encyclopædic learning. In the same way the spread of early Gothic, through the instrumentality of the Cistercian monks, can be appreciated only by knowing how their period of expansion happened to correspond and their centre happened to be France. However, as Mr. Sturgis wished his history to be distinctly limited to the purely artistic and constructive aspects of architecture, it is on this phase that I have concentrated.

The present have the advantage over the previous volumes of greater unity of content. Except for Turkish monuments, which would logically have been described with the rest of Moslem architecture, and those of Russia, which are at first only an offshoot of Byzantine art and belong also to Volume II., the whole of the material described is European and closely interrelated.

Aside from certain more recent phases of neo-classicism and *art nouveau* this material falls under the two general titles of Gothic and Renaissance. There will be in the course of this volume an analysis of these two movements from the points of view of historic development and technical character, but I would like to state at this point exactly

what I conceive to have been the rôle played by each, the special niche of each, of them in the general history of architecture, viewed by and large, and in a quasi-philosophical manner.

The basal concept of Gothic, as a philosopher would word it, is *dynamics;* it is the architecture of vital energy and arrested motion, as contrasted with *static* architecture which is based on the law of inert resistance. Earlier styles had been either wholly static, like Greek and early Christian, or a mixture of static and dynamic elements like Roman and Byzantine. The small percentage of dynamics in the Roman domical system had been so developed, it is true, by Byzantine architects that the ultimate expression of possible fusion of the two schemes had been reached. But the product, after all, was hybrid and without a future, with statics in the seat of power, and darkness instead of light the dominant note in a Byzantine interior. It was the force of inertia opposed to inert mass. That it did not have the germ of life in it is proved by the fact that it shot its bolt (St. Sophia) at the very beginning of its history. Medieval Europe took a hand in the constructive game with less biased mind. After the experiments of the Romanesque age, made in the attempt to go beyond the primitive statics of wooden-roof building, had resulted in mixed methods of tunnel vaults and domes—merely palliatives—the Gothic solution came, after many groupings, as a perfect embodiment of pure dynamics. It was the first time in architectural history that a living force was set in motion to overcome and neutralize the action of another living force. A Roman vault had been a piece of matter made up of devitalized atoms fused and coalesced into an inorganic whole, a mere dead weight. A Gothic skeleton, headed by its vaulting compartments, was a living organism, made up of constantly interacting units which preserved their individuality while acting in concert. Like a surgeon familiar with the healthy action and interrelation of every part of the human body, the Gothic architect knew how vital to the health of the whole structure was the correct interrelation of the material forces he was setting in motion. Not an atom of his structure was irrelevant or out of perspective: nothing vital was left to whim or chance. The laws of beauty were subordinated to the laws of scientific life—as in nature—and so a Gothic building became a living organism, none the less organic because the creation of man and not a natural growth. A growth, too, it was, and a slow growth. It took the combined genius of a century to evolve the perfect form,

that was to embody its law of life, and this century, 1140 to 1250, was the most momentous in architectural history and the one that most thoroughly repays study. Nothing has been done since then that can be set beside its achievements.

Because it was so organic and logical the personality of the artist was lost in the generic process of evolution diversified merely by the influence of environment and national traits. This logical quality led, finally, when carried to its dry and clear conclusion, to the reaction of an individual and decorative debauch which made the advent of the Renaissance easier.

The style of the Renaissance was not only based upon a return, as far as possible, to the static scheme but upon a divorce between what the Italians considered to be the irreconcilable elements of art and science in building. The heated controversies between Northern and Italian artists that centred around the international construction of Milan Cathedral just before and after 1400, showed the unbridgable chasm that existed between Italy and the rest of Europe in the conception of true architecture. In developing the Renaissance style Italy considered that she was freeing art from the trammels of logic and scientific necessity: whereas Gothic architects had rejoiced in conforming their forms and proportions to the laws of matter. Renaissance architects wished to be free to use any proportions and designs that taste or fancy dictated or their standards of æsthetics allowed, and just in so far as the structural laws of Gothic balance interfered, they disliked and disregarded them. They called in the open or hidden help of metal chains, rods and beams to overcome the effect of natural law, so as to enable them to build loftier and lighter domes and to carry out what they considered the laws of beauty. In divorcing art from science (as even their own pseudo-Gothic architects had often done), they also divorced decoration from construction. In this the Renaissance leaders merely followed Roman and Italian traditions, which had always treated decoration as largely a matter of independent incrustation instead of as an expression of the structure.

The Renaissance style, therefore, was rather a system of design than of construction, and aimed severally or collectively, at three things: proportions, decoration, and simplicity. In Palladio, for example, we see the quintessence of proportion and simplicity: in the Florentines and Lombards the quintessence of proportion and decorative effectiveness. To Gothic emotionalism and moods, due to the

fact that every detail was expressive of matter as force in motion, the Renaissance opposed the expression of calm, completeness and finality, corresponding to its keynote of matter at rest. And, as inertia is much simpler in its manifestations than action, the forms and norms of the Renaissance were as simple and stable as those of Gothic had been complex and fluid. Hence the beauty of serenity and the obvious rhythm in the Italian masterpieces. Free from serious constructive fetters, art could and did lend itself more readily to the stamp of individual genius, and in this there is another striking contrast between the two styles. It is unimportant to know who built a Gothic cathedral: it was the work rather of an era than of a man. But it is absolutely imperative to ask who built a Renaissance palace. Art biography is now to overshadow art history. Yet the Renaissance architect was not free. He forged his own fetters; limited his own genius. Living largely upon the classic past he sought to standardize his own style and the whole style by a search for abstract beauty and for formulas based on antique models.

The story of the Renaissance style is the story of the passing from a rather free manner, full of individual charm, life and inspiration, in its handling of the antique orders and proportions, to a manner increasingly restricted and academic. This forced, as had been the case in Gothic, a schism between the partisans of the correct, logical and limpid, under the leadership of Palladio, and the lovers of the picturesque and the dramatic, under the impulse of Michelangelo.

It is plain to see, then, why it is so much easier for modern men to understand and imitate Renaissance work, which is so largely a matter of external beauty and proportion, and why it is so much more difficult for them to appreciate the less obvious and more subtle Gothic, generated from within, whose laws no modern architect has yet fully mastered and applied. This difficulty is increased by the great variety of forms in which Gothic can be embodied, compared with the simplicity and uniformity of Renaissance, to whose advantages must be added that in its emphasis upon decoration rather than structure, and on civil rather than religious buildings, it is, more essentially than Gothic, in line with modern developments.

Yet even the simpler Renaissance norms and linear relations, as they are explained by early masters such as Alberti, Filarete, Martini and De l'Orme, have not been mastered or hardly even studied by modern architects and historians. It is in these geometrical ratios and rela-

tions, in this applied study of optics and perspective, that we find a connecting link between the masterpieces of both the Gothic and Renaissance styles, each in their way perfect works of architecture. If in the Renaissance later architects have found an inexhaustible mine of motifs it is not merely because they could assimilate it more easily—at least in a superficial way—and because its classes of structures and modes of life correspond more closely, but because it went back to the same classic sources from which modern art is continuously borrowing. Gothic, on the contrary, suffers under the disadvantage of its loneliness, which is hardly counterbalanced by its superior plasticity and picturesqueness. In modern work it is often difficult to disentangle the Renaissance from the Classic elements, but Gothic work is unmistakable. And, being so foreign to us, we have only lately begun to understand it and most imperfectly to reproduce it, whereas Renaissance with its offshoots lies at the basis of almost everything we build.

In regard to the period when this history closes, there may easily be some difference of opinion. After Barocco became prevalent the treatment has been made briefer; and only the briefest sketch is given of the historical trend after the first decades of the Eighteenth century. Yet I think architects will admit that the fifty or sixty years that followed the first bloom of the neo-classic revival were the most melancholy in the whole course of architectural history since the Carlovingian era. Then came the aberrations of neo-Barocque and of Art Nouveau beside the usual negligible platitudes. So, there would be nothing to be chronicled worthy of study until we reach the men who have been the teachers of the present generation. Of these men and of the effect of their work it is too early to speak.

A HISTORY OF ARCHITECTURE

A HISTORY OF ARCHITECTURE

BOOK X.—RISE AND EVOLUTION OF GOTHIC IN FRANCE

CHAPTER I

REVIEW OF ROMANESQUE AND ORIGINS OF GOTHIC IN FRANCE

THE main current of European mediæval architecture had been followed in Volume II., under the caption "Later Romanesque," as far as the Transition, in the middle or close of the Twelfth century. It is not easy for us to realize what tremendous progress civilization had been making during the last hundred years of that period; what new territories it was bringing under its sway—especially in northern Germany, Great Britain and the Slavic provinces. Then and in the next century, architecture was carried into new regions and wood was replaced by stone or brick.

There is, we have seen, less unity in this Romanesque than in any other style. In fact, it is a misnomer to call it a style, if we use the term to mean the buildings erected during a certain period in Europe. There is no stylistic connection whatever between a church in Rome and its contemporary in Milan: the one an almost exact replica of an early wooden-roofed thin-walled Christian basilica, the other a sombre, heavy, vaulted structure that looked forward instead of backward. While this is true if we inspect every work produced between c. 1000 and 1150 or 1200 in various countries, the question takes a different aspect if we eliminate all works, like wooden-roofed churches, which do not enter into the evolution of vaulting as it seeks for the perfect solution that was to culminate in the Gothic system. If we do this, then the monuments that count fall into place under three great heads; domical churches, tunnel vaulted churches, groin or ribbed vault churches. The domical style, as we have seen, did not become popular; aside from central domes as at Ancona and Pisa, or domical 'sports' such as St. Mark's or the Eremitani at Palermo, there was but one large native domical school, that of Perigord in Central France.

This school radiated, to be sure, over neighboring provinces of France and survived in the Plantagenet Gothic, creating an interesting type of ribbed vaulting that was essentially a ribbed dome, and most effective in its broad lines. The second group, that of the tunnel vaults, with semi-barrel vaults over the aisles, was also not only created but developed and centred in France, being based on Roman prototypes in Provence. Its vaulting was most ingeniously combined in developed cases with the groin and ribbed vaulting of the third group, but it did not satisfy the men who were trying to create a well-lighted and well-proportioned interior, in which neither nave nor aisles should be sacrificed. The necessity of a continuous counter-thrust for the tunnel vault of the main nave could not be overcome. So, this method did not go beyond southern, western and central France, except for some few imitations in Spain and Italy. The third group, that which used groin and ribbed vaults, was not only more generally diffused but is historically more significant. It dominated all the vaulted schools of Italy, of Germany, of England and parts of France such as Normandy, parts of Burgundy, etc. The ribbed vaulting quickly drove out groin vaulting and led to the use of the grouped Romanesque pier and to the gradual improvement in wall and vault construction. To the old method of horizontal beds in vaulting was substituted that of radiating beds. The most radical of all changes was that of the use and treatment of stonework. Until the eleventh century, brickwork was very general,—a Roman inheritance,—and a stone was regarded not as a unit but as part of a mass. There was no stone-cutting worth mentioning; no skill in handling surfaces or mouldings. Now, before the close of the eleventh century, the entire aspect of the stone-cutters' art had changed. The classic instances at Winchester and elsewhere, where Saxon or early Norman crudity stand side by side with the later exquisite handling, are typical. The keynote to this change was that, breaking away from the antique method of finishing surfaces after construction, the Romanesque architects established the rule of finishing each block before setting in place, thus ensuring individual responsibility. It was some time, it is true, before they broke entirely with the Roman tradition of their revetments for parts of the exterior, but this progress was also made before the beginning of the Gothic era. With the progressive refinement of stone-cutting, which culminated toward 1150–1170, the mortar beds became thinner, the joints and profiles sharper, the mouldings more

numerous and skilfully grouped for light and shade. Decorative sculpture which was at first largely flat in its effects, like a stone tapestry, developed on a larger variety of planes and was more and more concentrated in the portals, whose depth and richness were constantly increasing. Aside from the vaulting methods employed, one finds differences between schools and styles to depend largely on different methods of treating the stone work, and this in turn depended fundamentally on the quality of local and provincial quarries, of looser or finer texture, allowing greater refinement of detail or restricting to bolder and broader effects. This is well exemplified in the English schools of the northern, eastern and western sections. In other words, the Romanesque that really counts is as much an architecture of stone as Gothic was to be.

With the increased skill in stone-cutting there came, at the close of the Eleventh and the beginning of the Twelfth century, far greater confidence among the architects as to their ability to vault. Large Norman and Rhenish churches left unvaulted when built were covered with vaults, and experiments in statics were attempted. These advances were most marked in those provinces that were to take a prominent part in the Gothic movement.

In reviewing the situation as to architectural details, we must not forget the transformation of pier, column, capital and base. The grouped pier was substituted for the monolith column or the plain square pier. Columns were used with decreasing frequency, and often built in courses. Bases, at first insignificant, became of increased importance and intricacy; they were used to increase the stability of the piers and usually followed their outline in their lower section or plinths. The base proper tended toward the shape of an inverted capital, but the general Attic scheme was adhered to, with the frequent addition of corner spurs. There was, of course, considerable difference in schools, with greater classic influence in Italy and France. In the capitals there was the greatest variety. The cubic capital, plain or decorated, was a popular novelty. Quite as popular and far more general throughout the south, were the debased Corinthian and Composite capitals. The third class, which we may term the historiated or figured, was covered with fantastic animals or human figures, sometimes with actual Biblical or allegorical scenes; it was due to the fantasy of Lombard and other Northern artists and was current especially in the Central provinces. It is the least artistic. Finally,

there are those where the ornamentation has mainly a geometrical basis of interlaced patterns or of heraldic and schematic foliage. Nowhere do we find the tendency to copy natural forms which was to dominate Gothic decoration. In this particular it may be said that there is no preparation for Gothic as there was in construction. For decoration the change was not evolution but revolution. This applies not only to the capitals but to mouldings of all kinds and surface decoration, which, as we have seen, was particularly rich, for example, in Central, Southern and Western France. In England, on the contrary; in Normandy; in Germany; in Southern Italy, there was practically no decorative sculpture before the Gothic age, and figured sculpture as well was extremely rudimentary and rare.

The various architectural schools studied in Volume II., as we approach the Gothic age, fall into a few large groups that must be reckoned with as factors. There is the Lombard School centring at Milan and Pavia and ruling even as far south as Apulia, to which is commonly ascribed the merit of first developing ribbed vaulting. With it must be grouped the Rhenish School, which led in Germany, and, in its origins, the Norman School. There is in this group a thoroughly Teutonic tone; broad, heavy, simple, yet with fantasy and originality of design. How the interrelation was established we are not certain; but it existed, though there was in the north greater sobriety and a more developed feeling for composition than in Italy. This school was the most closely related to Gothic. The second group is centred in France, in the western, central and southern provinces, with offshoots in Spain and Portugal. Auvergne, Poitou, Burgundy belong to it. It is impossible to give its character in a few words, because it was so many-sided. From its Burgundian section sprang the two greatest Monastic architectural influences of the age—Cluny and Citeaux,—which carried certain forms of Romanesque and early Gothic over a large part of Europe. Cluny was responsible for the peculiar plan of English cathedrals, with double transepts; and the Cistercians for their square choirs.

The third or Anglo-Norman School is almost as important as the French. While England was at first dependent on Normandy, it soon reacted on its mother-school. It is a fact not sufficiently recognized that English Norman Churches surpassed in size as a class all those on the Continent. If one were to select the notable peculiarities of this school, one would pick out the splendid second-story galleries and

the enormous columnar piers. A desire for light in so northern a climate prevented this school from abandoning wooden roofs until the Gothic age, and from experimenting with the darkening tunnel vaults that were less detrimental in the more southern schools of France. The elongated plan and low narrow effects that were to characterize English as distinguished from Norman churches originated at this time as well as the stone-cutting skill in which the English preceded the Germans and even the French, in a species of *bravura*.

In all these schools architectural composition had become an art before c. 1100, and a master architect was a personage of importance, whether he were monk or layman. Monks not only built their own churches and monastic establishments but were called from their monasteries by bishops and communes to take charge of building operations. Laymen like Master Raymund were given full power. When he was engaged to build the cathedral of Urgel in Catalonia in 1175, he not only had untrammelled charge of the works without supervision, but charge also of the finances and property of the cathedral under a seven-year contract. It was, in fact, during the Twelfth and early Thirteenth centuries that head architects, both lay and monastic, had the most power and could be most certain of unity of plan and detail in their building operations.

The above facts can be verified by a comparison between the illustrations of Romanesque work in Vol. II. and those of the following chapters. This progress in scientific methods corresponded, of course, to the larger opportunities in the field of architectural achievement afforded by the increasing wealth and culture of society, and by the rivalry in building operations between the rapidly organized free cities and municipalities, the large monasteries and the bishops, assisted by the generosity and helpfulness of an age of general religious enthusiasm among rich and poor. Architects had an ideal backing and ideal opportunities. This stimulus added to the new mastery over materials and a higher education, made the evolution of Gothic out of Romanesque possible. It is a matter of dispute where the structural seed for the new synthesis was sown: whether in Lombardy, Normandy, England or the province of Paris, but there is no question as to where the seed was nurtured, grafted on the old Romanesque trunk and under its protection given a chance to come to its own efflorescence. This took place in the neighborhood of Paris between 1100 and 1150.

The rest of the Middle Ages is mainly occupied with the development of a certain type of Romanesque into the Gothic style; with the gradual displacement of Romanesque methods and forms as the new style demonstrates its superiority and pushes its way from France into other European countries, and with the various historic and national transformations that ensued.

The process of internal evolution which produced developed Gothic lasted for almost a century, until shortly after 1200. The process of dissemination outside of the land of its birth in Northern France, took considerably longer, not being completed until the close of the thirteenth century. There were even a few sections, such as parts of Central and Southern Italy, where Romanesque survived until the advent of the Renaissance. Aside, however, from these sporadic Romanesque survivals, the Gothic monuments furnish the student with the great bulk of material to be studied between the years 1200 and 1500. Of course the date 1500 is quite arbitrary. The process of the supplanting of Gothic by Renaissance was slower and more irregular than its conquering process had been because, while Gothic was the logical flowering of Romanesque, Renaissance was the anthithesis of Gothic. The supplanting process commenced in about 1420 in Italy where Gothic was never understood or liked, and before 1500 the downfall of Gothic was practically complete throughout the peninsula. France was the quickest to follow, but while she admitted Renaissance forms soon after 1475, she did not entirely abandon Gothic until about 1550. Spain, Germany and the Netherlands were even slower, and England practised a form of late Gothic until after 1600.

During this period there was no stagnation but a continued evolution. Attention was first concentrated on structural problems; then on the relation of materials to structural forms; then on the modification of forms to suit mathematical ratios and æsthetic ideas; then on the decorative use of these forms and the adaptation of decorative details to subserve structural purposes. We give certain names to these and the later successive phases, taking mainly for our norm the French buildings which must be the source and standard of true Gothic. So we speak of Early or Transitional; of Developed; of Rayonnant or Geometrical; of Flamboyant, Curvilinear and Perpendicular. England contributes important elements during the latter part of this development. These terms are of quite general

application, for while local characteristics strongly colored style in each country these were overpowered by international stylistic waves.

Why do we call this art Gothic? The term is purely conventional and seems to have been invented in Italy during the Renaissance as a derogatory way[1] of describing pointed mediæval as distinct from classic buildings, as if they were the product of barbarians. Illogical as it is, modern critics, after fruitlessly suggesting substitutes, have decided to retain it. The term, while originally applied to architecture, is extended to include every other branch of art as developed during the same period. This is perfectly correct, because architecture was lord and master of the entire artistic field as at no other time in its history. It conditioned the two most extensively used branches: figured sculpture in stone and stained glass windows.

The treatment of Gothic architecture is perhaps the most satisfactory to the historian not only because of its position as artistic dictator but for other reasons. The period it covers was one of unrivalled building activity. Its inception and development out of previous premises can be traced with comparative ease. It coincides with the high-water mark both of technical perfection and of æsthetic ideals, which are so seldom properly combined. It is more consistent and logical and spread over a wider territory than any other style and rests on mathematical and scientific premises that are undeniable. There followed a remarkably clear and successful adaptation of means to ends and a fuller embodiment in art of the ideas of the age than at any time since Greece. Nothing fundamental was left to the whim of individual artists. To the student who has mastered the intricacies of the style and their real causes, there are no mysteries and no real difficulties. He can date any part of a Gothic building in normal cases within fifteen or twenty years merely by looking at it without knowing anything of its history.

Using France as a basis, the characteristics of Gothic architecture can be given in a few sentences. These characteristics are primarily constructive and secondarily æsthetic. Gothic architects were above all things mathematicians, geometricians. They aimed at a safe system of vaulting by means of an interacting skeleton or framework based on static laws which, after a long and bold but careful process

[1] The other favorite term was "German" (Tedesco) style because so many German architects happened to be called to Italy (e. g., Cath. Milan) to put up Gothic buildings.

of experimentation, were understood as they never had been before, assisted by an increased perfection of technique in stone cutting and laying. Walls were practically eliminated as a necessity. The scheme was to reconcile safety with the extremest possible preponderance of voids over solids, in order to secure plenty of light and unity in church interiors. This was done under the guidance of a love for aërial perspective and ver ical effects. Everything constructively unnecessary was eliminated: every structural element was frankly shown. The science that dictated it was exulted in. The time required to develop Gothic was simply the time during which laboratory experiments were being conducted in the *chantiers* to gradually adapt the forms to the new principles.

At the same time an artistic evolution was in progress that paralleled the structural evolution, though, of course, it began a little later and depended upon it. This shows itself in the scheme of geometric decoration; the scheme of floral ornamentation taken directly from plant life; the new school of figured sculpture which turned the cathedrals into Encyclopædias of science, history and religion; and the creation of the art of figured stained-glass windows which was to give the tone to church interiors as well as supplement figured sculptures in their mission of instructing the people. All these forms of art seem so absolutely a part of the new architecture that we cannot think of it without them all, and feel that when any one of them is conspicuously absent or weak, the completeness of the work as an embodiment of Gothic art has vanished. In them as well as in the constructive work the abolition of plane surfaces is the material keynote.

Political and social conditions were then particularly favourable in France. The spread of education and well-being, the organization of flourishing self-governed cities, the newly awakened religious fervour, the rise of Episcopal power and the sympathy between clergy, people and universities, made for the building of large cathedrals and the generous co-operation of every class in the production of works of art. Everything was planned on a large scale—so large that it was often found impossible to complete the work. The cathedrals became the pride of the new communes, and the centre of their life.

In studying these structures it must be remembered that until then the great building agencies had been the monastic orders and that practically all the architects and other artists had been monks.

In the monasteries were the teachers; the mass of workmen were either the lay brethren or dependent workmen. The organization of guilds of lay artisans during the Twelfth century made it possible for Gothic art to be developed outside monastic influence. When the movement began, we have a contemporary document which gives some idea how a large building was erected. It is Abbot Suger's report on the construction of the Abbey Church of St. Denis in c. 1140. He says that he gathered artists from all parts of France. Soon after we find that it was the custom to issue an invitation to architects to compete for the honour of directing the erection of a cathedral. The historian Gervase tells us how this was done in the case of Canterbury Cathedral in 1175. The big chantier which was then opened was not, as heretofore, a sort of succursale of a monastery, under a strict semi-military discipline, but an aggregation of independent lay artisans. This explains the freedom and variety in the workmanship which charms us. It is like the old Greek work under similar conditions. As Gothic art progressed, as the building mania spread during the thirteenth century, the lay guilds increased in power and numbers, until art guilds existed in every city, and a sort of relationship and community of action established between those of each country. Artists were continually travelling or being called away. New knowledge soon became common property.

This was a help in the breaking down of the provincial differences of style which had been so characteristic of Romanesque. In France itself, where these had been so numerous, it is not only difficult to find more than five or six schools, in place of more than a dozen Romanesque schools, but in some cases the differences between them are not at all fundamental. In fact, one may say that there are mainly three groups: that headed by the Ile-de-France or Parisian School; that of the Angevin Schools, and that of the South. To the first group belong the schools of Normandy, Champagne, Picardy and Burgundy. The characteristics of each one will be studied later. Outside France it was natural that the introduction of Gothic should everywhere weaken the local building traditions.

Monastic builders like the Cistercians and then the Dominicans and Franciscans, who carried the new style wherever they went, were cosmopolitan. The calling of French lay artists to England, Italy, Germany, Hungary, Scandinavia is a matter of record, and they often went in groups and taught the new style to local artists. The dif-

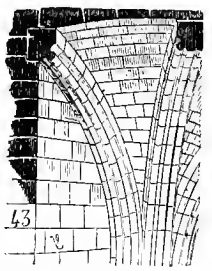
ferences which we observe when these local schools develop are mainly national and not, as heretofore, local, and are due to temperament, degree of artistic taste, and limitations imposed by materials and training.

There are two other points to consider at the outset: first, that Gothic is essentially a style based on stonework and to which stone is absolutely necessary for its proper expression; and second, that it was developed to solve the problem of several-aisled interiors with their interrelated thrusts. Therefore when a building is in brick or in wood, it cannot be a complete exponent of Gothic; neither can it be when it is a one-roomed structure, or one formed of a series of independent single vaulted units. In this particular, again, we note the analogy to Greek architecture, where the temple design was the one norm—copied in tombs, in treasuries, in portals. Gothic stonework had to be in small units. This is evident when we remember that the style abolished all broad expanses of wall masonry, and that when, as in the vaults, there was a considerable uninterrupted surface, this surface had to be so varied in its lines that the smallest units were required in order to follow the curved planes. The plan of rubble core with stone facing was largely abandoned except, for instance, in military and engineering works, and the stonework was formed throughout of these small units. The period of the greatest technical perfection in stonework was that of the formation of the style, from c. 1160 to c. 1220; whereas in many of the greatest cathedrals of the developed style of the thirteenth century the workmanship shows carelessness.

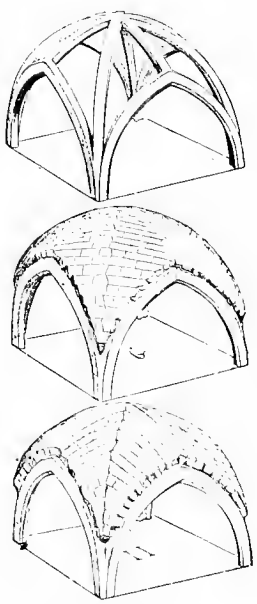
The first thing to consider in detail, then, is Gothic vaulting, as it is the germ from which the whole style springs.

The fundamental difference between Romanesque and Gothic vaulting was not at all the substitution of the pointed for the round arch, but the use of ribs as a support for the masonry of the vault. The diagonal ribs were not usually pointed, as some writers state, but round; and they divided the vault into four independent compartments. In the groined vault the structure was an undivided unit formed quite simply from the intersection of two barrel vaults and therefore a work requiring great care in its execution, as any flaw would affect the whole, and the diagonal ridges were lines of danger where the junction and interpenetration of the units had to be made with particular care. The placing of projecting ribs along these

ridges transformed them into lines of sustaining power and a sort of permanent centring. These ribs formed a framework (Fig. 1) not only self-supporting but able to sustain the weight of the entire vault. The French called them *arcs ogives*, from *augere*, "to add," because they so increased the strength of the vault. In order to give the ribs this function the surface of each vaulting compartment was slightly arched and at times, especially in early vaults, it was somewhat dome-shaped. As these vaulting compartments were thus made to shift their responsibilities, it was no longer necessary to construct them so heavily: they became merely screens or transmitters. The change that took place here was the exact parallel to what happened later in the gradual thinning and elimination of the solid wall surfaces of nave and aisles. The ribs were now able to discharge the weight they received not along one continuous line, as was done before, but at the points where the ribs ended either against a wall or on a support in the form of a pier or column. In order to assist in the transmission of this thrust the lines of the ribs and the vaulting surfaces were given a slightly downward slant which became perfected in the thirteenth century, after the domical tendency had been eliminated. To the old uncertainty as to the weak points in a structure there was substituted absolute knowledge of the points where counter-thrusts should be established, in the form of buttresses. Two other sets of ribs beside the diagonal or groin ribs were required to complete the framework: the wall or longitudinal ribs and transverse ribs for which the French term is *arc-doubleau*. The vaulting compartments or panels—which English writers call "severies"—rest on this framework without being incorporated in it. The two sets of ribs just described were given the pointed form in order to partly counterbalance the greater span of the diagonals. It was (Fig. 2) natural for the Gothic architect to make the crown of his vaults at the meeting of the

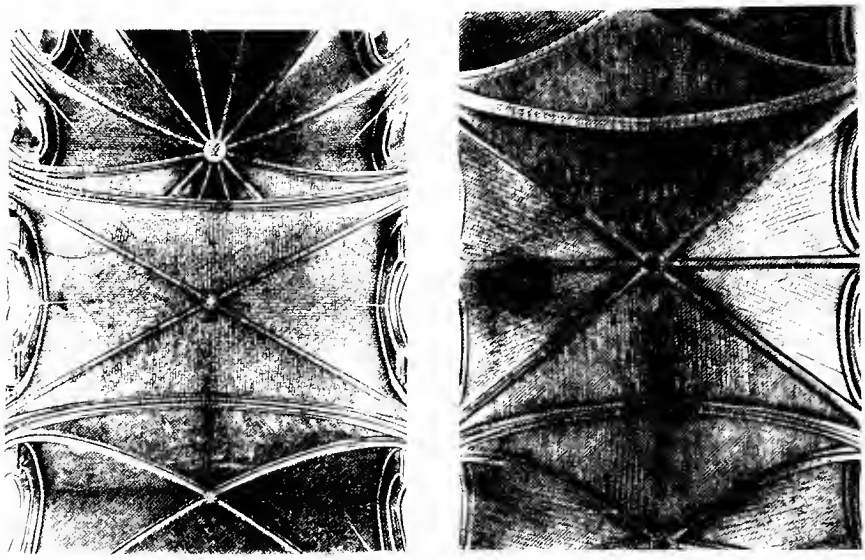


1—Structure of severies in vault. (From Viollet-le-Duc.)



2—Domical Gothic vaulting. (From Viollet-le-Duc.)

diagonals higher than the crown of the longitudinal and transverse ribs, but it is a mistake to imagine that a pronounced domical form was usual, for this was a specialty of the Angevin school. The incline was usually slight, even in early work, and became even less apparent during the thirteenth century. In some cases stilting was also used, in order to raise still more the crown of the framing ribs. In longitudinal ribs over clearstories, the springing was on a higher level than that of the diagonals, merely a form of stilting. I shall not speak here of other classes of ribs, of decorative or constructive value, which appear in later Gothic works, especially in England.

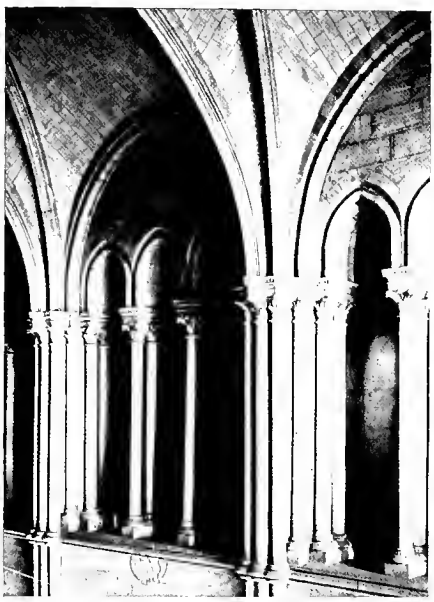


A. *B.*

3—French quadripartite vaulting (*A*. S. Pierre, Lisieux) with apsidal vault; and sexpartite vaulting (*B*. cathedral, Laon): showing curved surfaces and coursing of severies. (From Simpson.)

There is, however, a form of vault that influenced the early plan and structure: the sexpartite vaulting in which there was an intermediate longitudinal rib bisecting the centre of the vault and transmitting part of the thrust. This feebler thrust required less support below. Hence the alternation of columns and piers in some transitional buildings. In Fig. 3, the left-hand vaulting illustrates not only the normal quadripartite form, but the radiating vaulting compartments developed in choirs. The sexpartite vaulting is given on the right. In these illustrations we can study the minuteness of the units

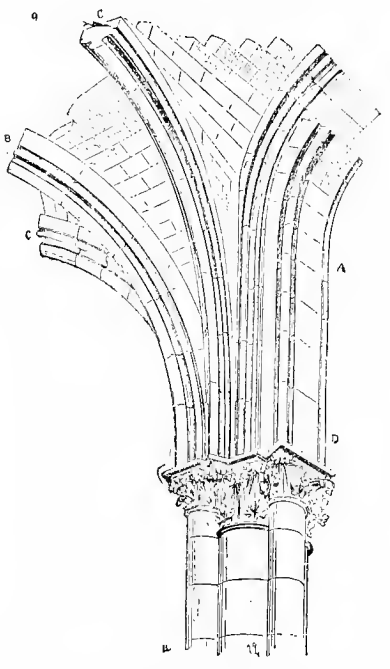
and the curves they take in following the vaulting planes. The ribbing here is extremely delicate, and was reached only after a half-century of progressive diminution in bulk. In Fig. 4 there is an illustration of the way in which the three ribs spring from the abaci and of the diagonal arrangement of units in the vaulting cells: it does not illustrate so well the fact that the wall ribs as a rule spring from a considerably higher level than the transverse and diagonal ribs, thus giving a decided twist to the surfaces. In certain French provinces, as we shall see, a domical form of ribbed vaulting was used, which is illustrated in Fig. 2, but it never came into general use and after a while was superseded even in its own section by the normal type.



4—Triforium of church at Beaumont. (From photo.)

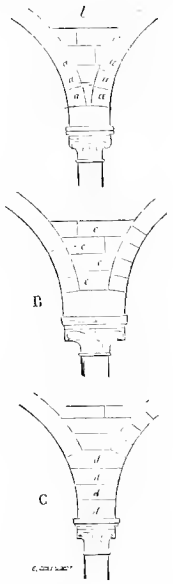
The second element in the Gothic framework was the pier, and the vaulting shafts connected with it. In this the practical Gothic spirit shows itself as clearly as in the vault. There are three stages in its development. First is the pier of the earliest transitional buildings, which has a square core with engaged shafts on its pilaster faces to support the ribbing shafts and the archivolt mouldings. This necessarily heavy support was discarded wholly or in part in the second stage of primitive Gothic, embodied at Noyon, Notre Dame and other works of the second half of the twelfth century, in favour of the simple round column; not monoliths, like the Roman shafts, but built up in courses. The vaulting shafts and archivolt mouldings start from the capital of these heavy columns. In Fig. 6 the mechanism of this structure is illustrated and in Fig. 7 we can study the progressive increase of the *tas-de-charge* or single block above the capital. As this arrangement is evidently a sin against the otherwise inexorable logic of Gothic ideas, because it does not follow the constructive forms, we must believe that it was due to the desire for room on the ground floor. The third stage, beginning shortly before 1200,

returns to the scheme of the grouped pier, which can now, owing to the progress toward delicacy of form, be made much slenderer. The basis of the group, however, is no longer a square nucleus. It is either a circular core (the column) with four shafts engaged in its surface; or else a core faced with an elaborate group of shafts corresponding in outline to all the mouldings of vaulting shafts and archivolt mouldings. The former simple scheme was that adopted in most of the masterpieces of the thirteenth century, and is here illustrated by the pier and vaulting of Amiens in Fig. 5. This final form made Gothic logically homogeneous. Of course, there were variants and transitional forms which will be noticed in describing the monuments. Their bulk is steadily reduced until the minimum of safety is reached, and they are spaced more and more widely according to the same plan until the choir of Beauvais showed what this limit was. The capitals and plinths of the supports have a charming variety; they are treated with a plastic elasticity to ensure the greatest strength and to adapt themselves to the outlines of piers and mouldings. The treatment of the masonry immediately above the capital is illustrated in the simplest form of its evolution in Fig. 6, which gives its evolution before 1250, showing the gradual change in the *tas-de-charge* or courses from which the archivolts spring. How this worked out in detail, as to moulded ribs, also appears in early simple form in Fig. 7 and in the more complicated memberment made necessary by the grouped pier in Fig. 8, where the typical mouldings of the early thirteenth century are given for all the ribbings—transverse, diagonal and wall. An even fuller understanding of the elaborate juxtaposition of mouldings in the vaulting at a certain level above the pier on all sides is given in the plan of Fig. 9, from Amiens. The exactness and delicacy of

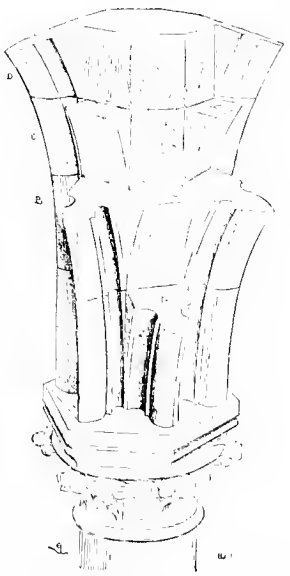


5—Pier and vaulting system, nave of Amiens cathedral. (From Viollet-le-Duc.)

the handling required for the sort of designs that henceforth prevailed, far surpassed anything thus far known in architecture.

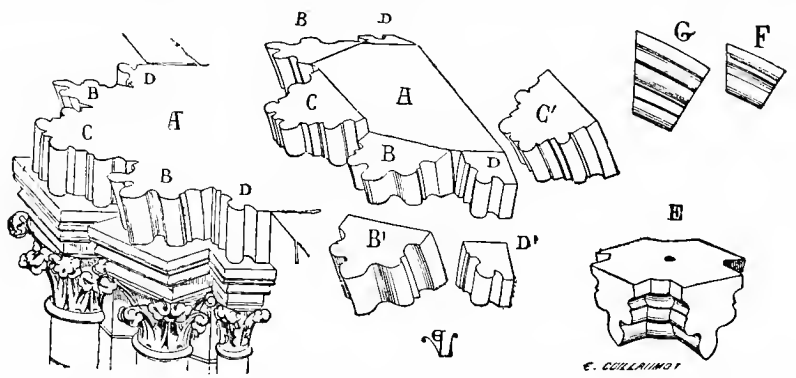


6—Tas-de-charge, evolution. (From Viollet-le-Duc.)



7—Construction at spring from columnar shaft. (From Viollet-le-Duc.)

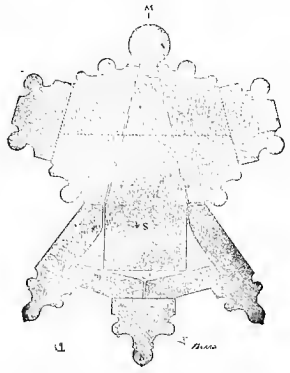
The third element is the flying buttress. In Romanesque vaulted buildings where the thrust was continuous, it was, as we have seen, necessary to provide a continuous counter-thrust. This was done,



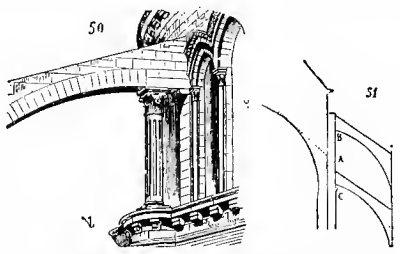
8—Tas-de-charge, shaft and vaulting masonry, in XIII century. (From *Annales Arch.*)

for example, in Burgundy, Auvergne and Provence, by the placing of a semi-tunnel vault over the aisles to abut the tunnel vault of the nave. When the ribbed cross-vault was introduced the concentra-

tion of the thrust at the base of the diagonal ribs made it necessary to reinforce the wall at these points. It was found that buttress-piers were not sufficient for this, so it was imagined to run up free-standing piers from the walls of the side-aisles opposite these buttress-piers and connect the piers with a flying buttress of

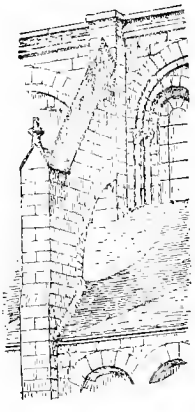


9—Section of vaulting system above piers, nave of Amiens cathedral. (From Viollet-le-Duc.)

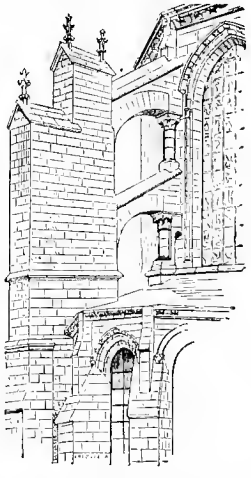


10—Primitive buttress of S. Remi at Reims. (From Viollet-le-Duc.)

a shape not unlike a segment of a semi-tunnel vault. This flying buttress met the wall-pier just above the base of the vaulting ribs of each internal compartment, where it could receive the diagonal thrust.



11—Transition buttress of nave of Noyon cathedral. (From Moore.)



12—Early Gothic double-batteried buttress at cathedral of Soissons. (From Viollet-le-Duc.)

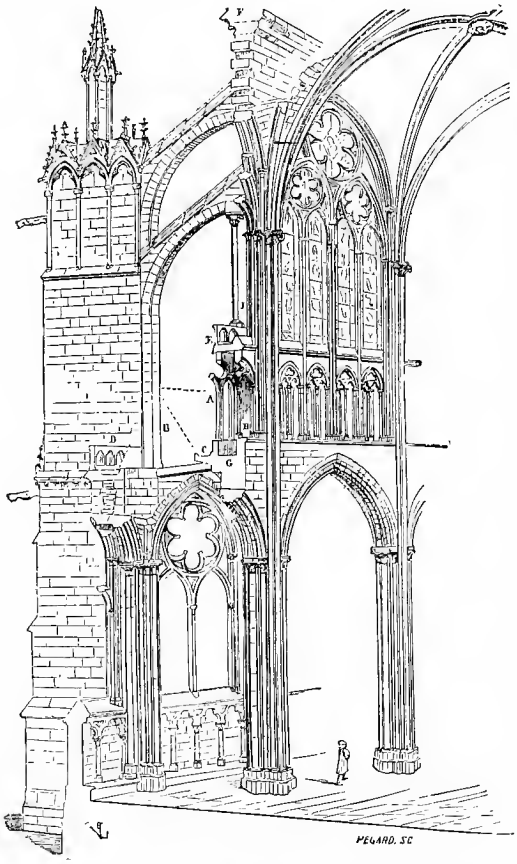
It did not abut directly against the wall but against a buttress-pier. At first hidden under the roof that covered the aisles it soon emerged into the open, after 1150. As it was the last element to receive careful

study, it remained in embryo until about 1160, was better understood toward 1180 and perfected soon after 1200, when the arched section was made very delicate and pinnacles above its point of juncture with the pier were used to load down the structure. It soon became a two-storied or double-batteried construction, pierced and decorated. A primitive form is given in Fig. 10, from St. Remi at Reims, where the angle is too

13—Buttress system of nave of Amiens, reinforced with sub-arches, and with open gallery. (From photo.)

wide and the arch too slender. There is greater efficacy in both the direction and weight of the buttress of Noyon cathedral in Fig. 11, where the pilaster also rises beyond it. Still before the close of the twelfth century comes the double-batteried system of Soissons cathedral which was only slightly lightened in the cathedral of Chartres, whose splendid system is illustrated later, in Fig. 48. It will easily be seen, by reference to the next few pages, how rapidly the scheme was

lightened between 1210 and 1250 to keep pace with the thinner walls and enlarged clearstory. The culminating stage, with its pierced masonry, is here illustrated in Fig. 13, from the nave of Amiens, which required reinforcing. In the nave of St. Denis, given in Fig. 14, we see a good instance of the finished product at the close of the evolution.



14—System of nave of Abbey church of St. Denis (c. 1245), showing developed French type, with glazed triforium and union of triforium with clearstory. (From Viollet-le-Duc.)

Assisted by a sketch of Villard de Honnecourt and by traces still remaining at Amiens, Reims and Beauvais, Choisy has shown the successive steps in the erection of a typical Gothic structure. The lower part of nave and aisles was first built to the base of the clearstory of the nave, including the buttress-piers. The pent roof over the aisles was then added and under its protection the vaults of the aisles were built: in preparation for them temporary binding rods or beams were stretched across at each pier above the capitals to counteract the thrust and settlement of the masonry. These were removed in course of time. The main walls of the nave were then run up to their full height. When the point was reached of the springing of the vaulting shafts, a line of binding rods or beams was stretched across the nave and imbedded in the masonry, as had been done in the aisles. Then the high-pitched roof was added and its heavy beams performed at the top the same solidifying function as the beams or rods did below when the main vaults were constructed beneath it, and the centrings were removed. When all settling was over, the

colonnettes surrounding the central shaft of the supports of the nave were added in cases where they had not been built in courses with the main pier. Being monoliths, they would be in great danger of breakage had they been set in place between their capitals and bases before the settlement was over. The construction proceeded from east to west; that is, it began at the choir (which was often temporarily enclosed for worship) and proceeded towards transept and nave, ending at the façade. But the entire ground story was usually completed even to the façade before the gallery and clearstory were commenced. Architects made drawings and sometimes models of the entire building, and these were kept in the architect's office or *œuvre* usually attached to each cathedral. But while the original general scheme was generally followed even when the work lasted more than a century, the deviations in details and in style were very important because the working drawings, often of natural size, were not made until that particular part of the work was actually under way and were often in the style of the day. I was so fortunate as to discover and identify the only existing original architect's model of a complete Gothic structure, that of the church of St. Maclou at Rouen, which I will reproduce and describe on page 121. It is important because it illustrates a fact of fundamental bearing: that when a building was begun it was conceived as a whole by a single architect and not constructed piecemeal as modern critics often imagine. There was a complete scheme for plan and elevation. If there were substantial deviations from it in the course of the work it was usually a misfortune, not an improvement.

After this introduction we will see how these facts are illustrated in the monuments.

CHAPTER II

THE DEVELOPMENT OF GOTHIC IN FRANCE

THAT part of Central France which was the nucleus of the old Royal domain, called the Ile-de-France, saw the birth of the new constructive movement. We may call it the Paris school, for its earliest stages can be studied only in and near Paris. This region was ripe for new ideas because it had no tenacious traditions. It was architecturally backward and had no particularly important structures built during the eleventh century. It had gone on using wooden roofs without experimenting with domes or barrel vaulting. When its architects were called on to put up buildings on a larger scale required by the new prosperity of the towns, they took as a basis, perhaps through Norman influence, the ribbed vault, and at once began using it in a plastic fashion, to cover oblong compartments or compartments of irregular shape over choir ambulatories. Those who are curious in such matters may study the way in which the experiments in this field were carried on in the Ile-de-France in Mr. Moore's book, where he starts with the apsidal aisle of Morienval in c. 1100, with very heavy and rudimentary ribbing, with but little progress until Bury in c. 1125, which is still heavy and tentative and lacks the longitudinal rib. In Paris itself, at St. Germain-des-Près, the apse has a celled vaulting on ribs which has the germ of the later choir vaulting. So, we reach St. Germer, in 1140, without discovering anything but preliminary and rudimentary sketches of parts of the new church.

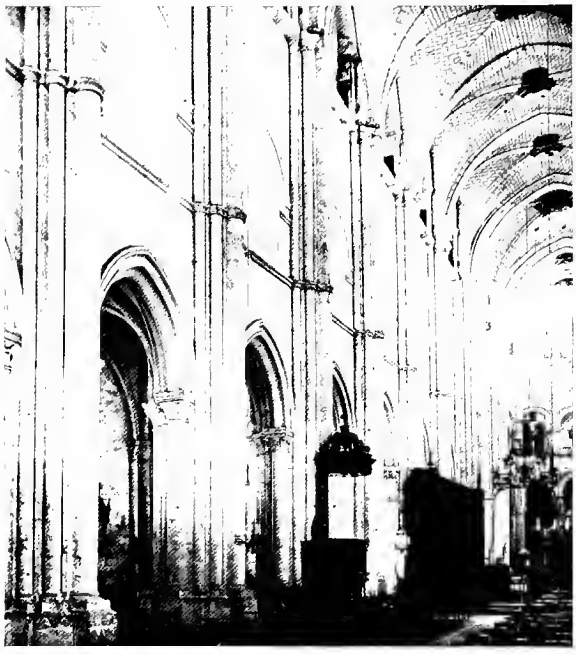
But from this time forward one is bewildered by the buildings that can be used to illustrate the transitional period: the most prominent are: the abbey churches of St. Germer and St. Denis, the cathedrals of Sens and Senlis, of Noyon and Laon, St. Leu d'Esserent, Notre Dame of Paris and the cathedral of Meaux. For comparative purposes I have taken the liberty of borrowing from Choisy his

illuminating birds-eye sketches of St. Germer, Sens, Noyon and Notre Dame. This carries us over a period of a half-century from about 1140 to 1190, if we exclude all of Notre Dame but the nave, which was the first part to be built. Now, before we come down to details, certain general facts will be noticed. In the first place, the form of the supports changes, and the heavy built-up column replaces the Romanesque pier. Then, the flying buttress, which was kept low and concealed by the roof at St. Germer, is found to function properly only when it is made to abut at a higher point, so it is raised above the roof and in plain sight. It is quite plain, but passes from extreme heaviness (St. Martin at Laon) to a gradual lightening of the arch (St. Leu d'Esserent). Thirdly, the favourite form of vaulting becomes not the Lombard quadripartite but the Norman sexpartite vault and this affects the form of the supports, which from being entirely grouped piers often become either entirely columnar or alternate columns and piers.

At the time when the movement began the age of the monasteries was on the wane and the rule of the cathedrals had began. The first two monuments we shall study are the abbey churches of St. Denis and St. Germer, but after that we shall meet mainly with cathedrals. The genesis of the Gothic vault has been looked for in Lombard churches like S. Ambrogio at Milan; in Norman churches like the Abbaye aux Hommes at Caen. If the true primitive form with pointed transverse arch was used in the cathedral of Durham (Vol. II, p. 385) in about 1090 then this favours the claims of the Norman school. The heavy ambulatory vaults of Morienval, however, in the Ile-de-France, dating from about the same time, were followed by so continuous a progressive series of vaulted examples in the same region that it seems quite certain the development took place here and not in Normandy. The aisles alone were first vaulted: then the choirs and finally the naves: the first nave covered with the ribbed vaulting was that of St. Germer, which followed very closely after the vaulting of its narrower spaces.

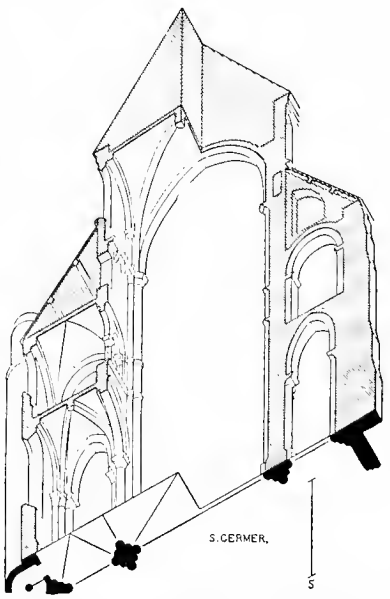
The abbey church of St. Germer is the first building with a homogeneous Gothic structure throughout, although to the superficial observer it would appear to be purely Romanesque. In fact, the exterior is so absolutely Romanesque that one of the foremost French critics, M. de Dion, has imagined that it was earlier than the present interior. But this is only, in reality, a perfectly logical relationship,

as Gothic features began with the innermost part of the structural interior and worked gradually toward the exterior. In looking at the interior view given in Fig. 15 it must be remembered that one of the most characteristic features, the open gallery over the aisles, has been destroyed. If we mentally restore it in the nave, from the remaining gallery in transept and apse, we shall have a design that has very few signs of indecision. Only the triforium gallery has the old-fashioned groin-vault: all the rest of the vaulting system is Gothic. The choir, which is thought to be the earliest to show the new system on a large scale, dates between 1130 and 1140. The piers have a square core—a Romanesque inheritance—faced on the outside by a single engaged round shaft to support the archivolts of the arcades of the apsidal aisle, and on the outside by a group of three engaged round shafts to connect with the vaulting shafts on both sides. A grandiose effect is produced by the great pier at each side of the entrance to the choir. These heavy piers, as well as the zig-zag decoration of the archivolts, are Norman features: in the period of developed Gothic we shall meet them in the cathedral of Coutances. The vaulting of the aisles of the apse shows a perfect adjustment of the troublesome irregularities due to the curved plan which had puzzled the builders of the previous twenty or thirty years since Morienval. There are the various ribs each with its supporting shaft, and a vault that shows a slightly domical form. The main piers of the nave are heavy, but they are more logically Gothic in their lines than the later columnar type, as the vaulting shafts rise



15—Abbey church St. Germer. Earliest Gothic nave; gallery closed. (From photo.)

without interruption from the pavement, resting on a very high basement. The stilting of the arches of the choir and of the transverse arches of the aisles is very noticeable and somewhat awkward. The pointed arch has now passed from the structure of the vault to the main arcades: the minor arcades and the windows, where there is less need of structural strength, remain round-headed. The cross section in Fig. 16 will show the curious elementary flying buttresses over the triforium gallery. They were concealed under the roof and abutted against the clearstory wall. They are the earliest example of the new plan of receiving the thrust of the vaults only at the points of greatest pressure. Another feature that is now obscured is the very rare double transept. The usual one at the east end remains: that to the west is obliterated except for two of the massive corner piers.

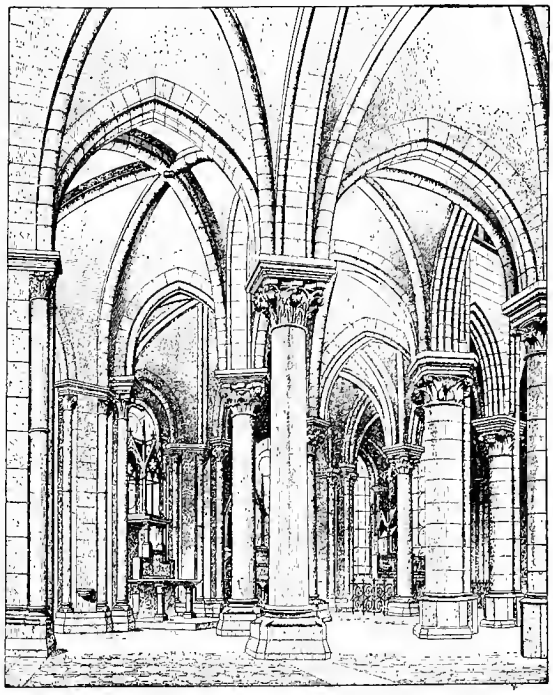


16—St. Germer. System. (From Choisy.)

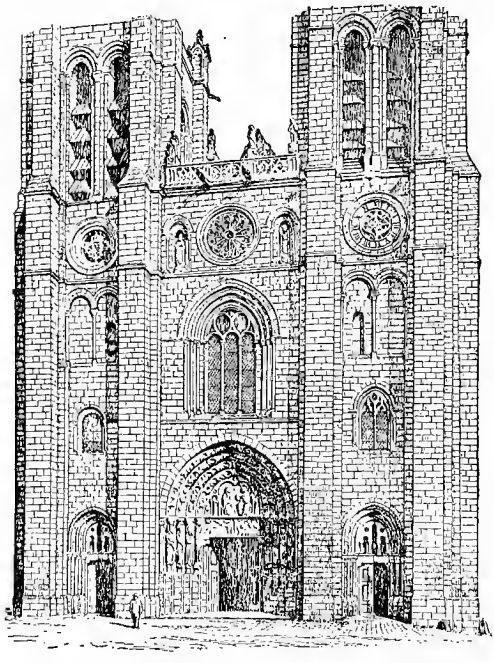
At St. Denis only the two extremities of the original abbey church built by Abbot Suger in about 1140 remain: the façade and the apse. It was the most famous church of its day in France, except perhaps the abbey church of Cluny, and through the gathering of artists from different parts of France to build and decorate it, as we can read in Suger's own account of the work, it must have been a powerful means of illustrating and spreading the new ideas. The vaulting of the aisles and chapels of the choir show an advance in refinement over St. Germer, and the plan with five aisles gave the model for the large cathedrals. A revolutionary innovation was the substitution of the column for the pier as a support in the choir-aisles. It is a charming innovation which seems less happy in later and heavier examples such as Notre Dame. Here at St. Denis it is delicate and symmetrical. Another feature in this choir is the stilting of the arches, which is so characteristic in choirs of the developed style (Fig. 17). In default of the body of the church which was replaced by one of developed Gothic style in the following century, we must turn for a record of the

next advance to the cathedrals of Noyon and Senlis, begun between 1150 and 1160.

In these buildings we see the earliest cathedrals representing the newly established communal life. The façade of Senlis (Fig. 18) is the first with some Gothic features that has been preserved. It has the three stories, the two flanking towers and the three portals between buttress-piers that we find in some Romanesque churches, but the portals are pointed and

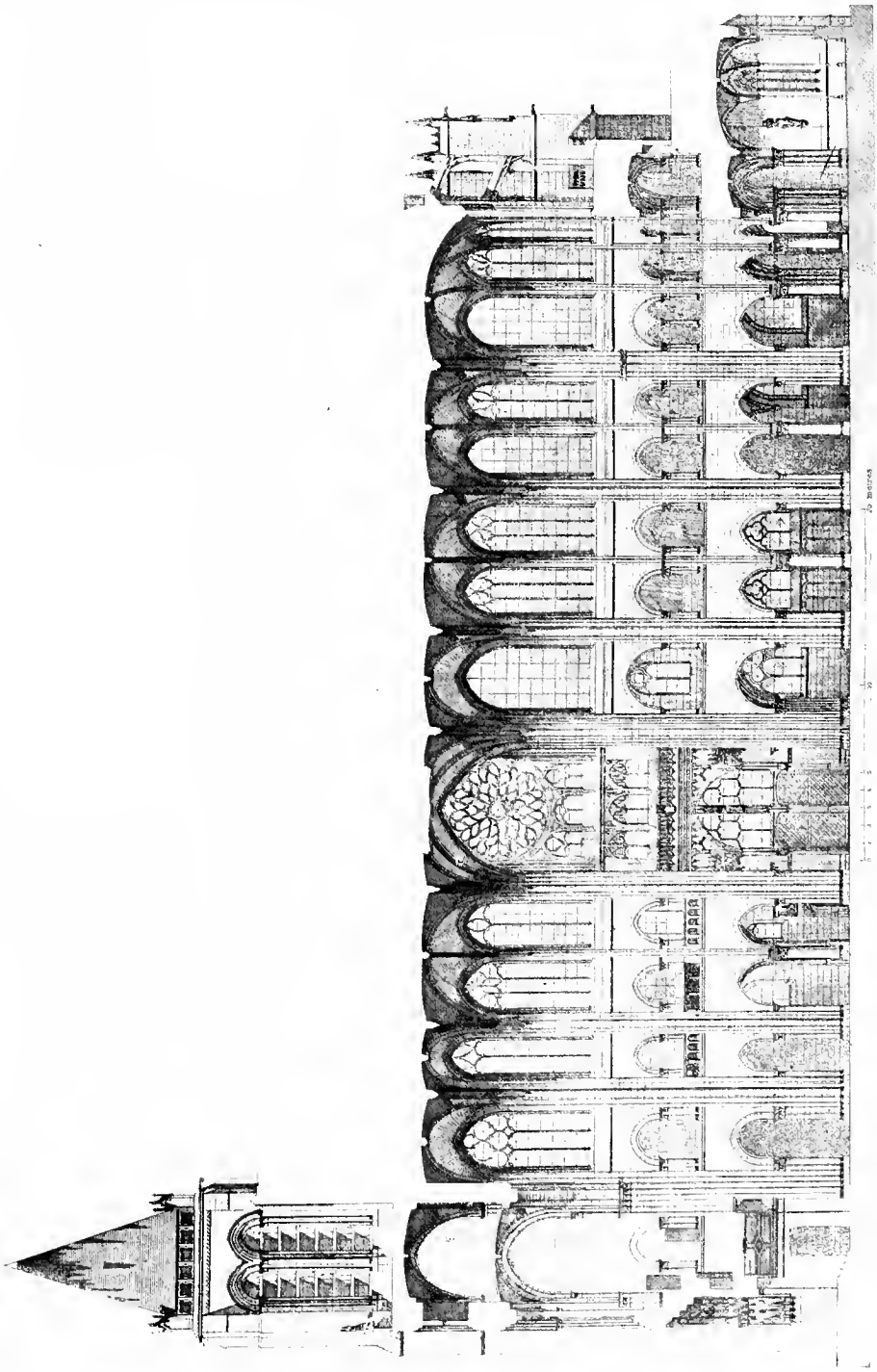


17—St. Denis. Ambulatory of choir. (From Enlart.)

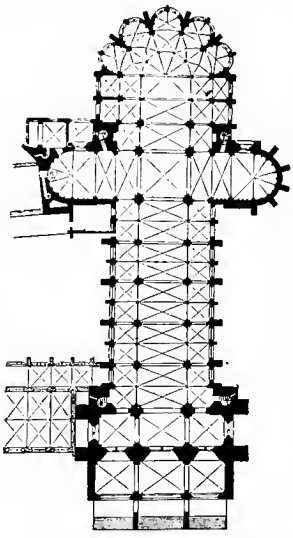


18—Senlis cathedral, west front. (From Moore.)

the central one has the carved decoration that is to be characteristic of developed Gothic art. Of course the traceries in the windows of this façade are a much later addition, but the windows themselves are original. The immense pointed central window was the predecessor of the rose or wheel window, which first appears in miniature above, then, as at Chartres, is enlarged so as to rival the pointed windows below and finally, as at Laon (Fig. 34), the wheel window descends and occupies the centre of an imaginary

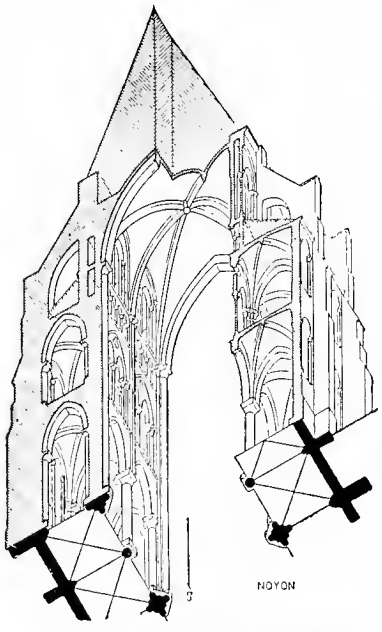


19—Senlis cathedral. Section along centre of nave. (Transept and clearstory beautiful example of late Gothic.) (From *Monuments Historiques.*)



20—Cathedral of Noyon: plan. (From Viollet-le-Duc.)

round-topped window, or else reduces these lower windows to a gallery, as at Amiens. The interior of Senlis is (Fig. 19) interesting and original. Although the primitive vaulting no longer exists,[1] the plan shows that it was sexpartite. There is an alternation of heavy piers of a type more developed than those of St. Germer, with simple cylindrical shafts on whose plinths the minor vaulting shafts rest. This substitution of the sexpartite vault for the oblong quadripartite vault appears to have come in with the introduction of the column as a support, and one suspects that the column was used in order to give more space for the congregation. The proportions are still about as heavy as at St. Germer, but there a more varied articulation of mouldings and shafts, and the pointed arch is introduced into new portions such as the triforium gallery.

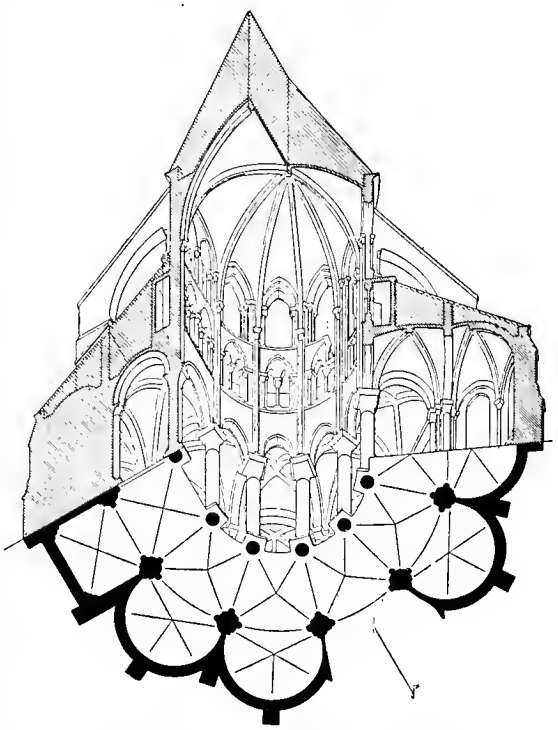


21—System of cathedral of Noyon. (From Choisy.)

22—System of cathedral of Sens. (From Choisy.)

[1] The present quadripartite vaulting was substituted in the XIII century.

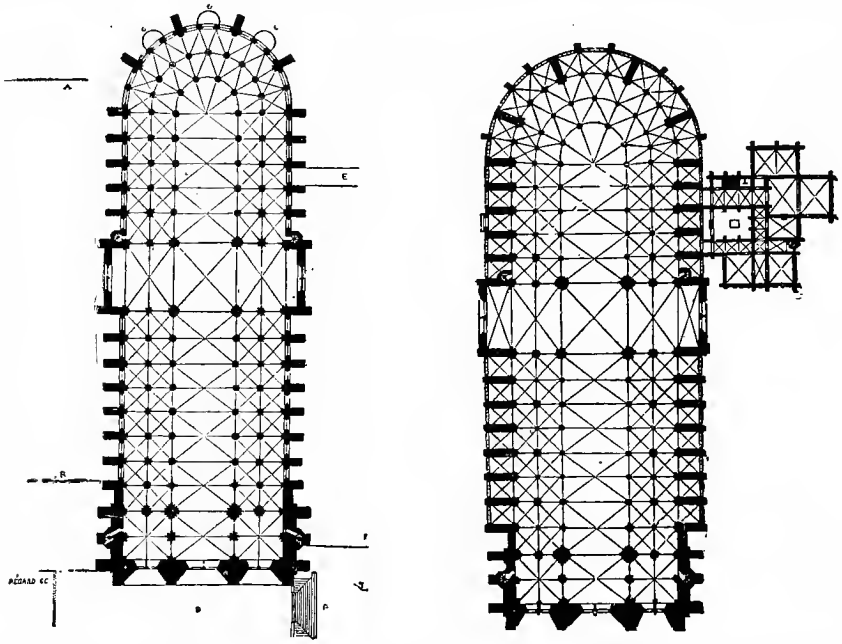
Noyon seems a little more advanced, in certain ways; it was begun between 1150 and 1155. The plan of Noyon in Fig. 20 is especially remarkable for the curved outline of its transept ends—a unique peculiarity—and for the development of its façade scheme. It was planned for the same system of sexpartite vaults with alternating piers and columns, but the present vaults are of the quadripartite oblong form that prevailed after 1200, and this mars the logical perfection of the interior. There is a greater lightness, especially in the triforium gallery, which is on a larger scale and with pointed arches. Above it is a line of false arcades or upper triforium below the clear-story, which is a feature already found at St. Germer and Sens. The cut from Choisy restores the sexpartite vaulting (Fig. 21) as it was originally planned, and shows the heavy flying buttresses also as they were before restoration. Both round and pointed arches are used and it is interesting to note that in the longitudinal ribs of the choir, extreme stilting is used and the round arch retained just where it would seem most natural to use the pointed arch in order easily to reach about to the level of the diagonal crown. In the choir all the supports are in the form of columns; in the apse itself they are extremely slender. In the three stories of the choir the ground-story is round-arched—a curious survival—while the two upper stories are pointed.



23—System of choir of St. Germain-des-Près, Paris. (From Choisy.)

A most interesting experiment was tried in the Cathedral of Sens. Here the intermediate support for the sexpartite vaulting consisted of two independent cylindrical shafts, with common base and capi-

tals. This innovation, picturesque but structurally dangerous, found no imitators in France, though it did in England (Fig. 22). There is no gallery over the aisles, only a line of false arcades to relieve the bare wall, according to the scheme that was to be adopted in the thirteenth century. On the other hand, the scheme is old-fashioned in its use of square vaulting compartments after the Rhenish, Lombard and Norman Romanesque method: another sign of archaicism is the evident intention originally to use the ribbed vault only in the nave



Original plan. Final plan.

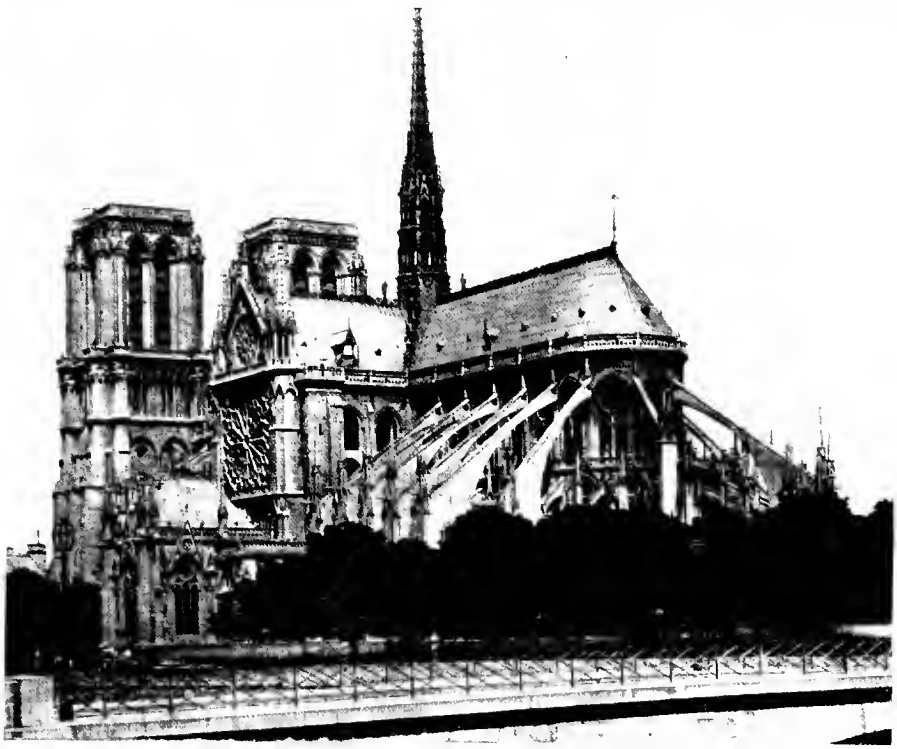
24—Notre Dame, Paris. Showing changes due to addition of chapels to nave and choir. (From Viollet-le-Duc.)

and to be satisfied with a groin vault in the aisles. This is clear from the awkward corbels inserted at the base of the ribs that were used when the vaulting was actually built. Evidently Sens was planned at about the same time as St. Denis (c. 1140), but the upper parts of nave and aisles were not constructed until later (c. 1168), which accounts for the suppression of the gallery.

One of the earliest apses with radiating chapels is that of St. Germain-des-Près in Paris, completed in 1163. Here the gallery is much reduced in size. In its fine symmetry this choir takes on some of the lightness that is to characterize developed Gothic. In the nave

the oblong quadripartite vaulting was used, in continuation of the tradition of St. Germer and Poissy, at a time when sexpartite vaulting had already been introduced (Fig. 23).

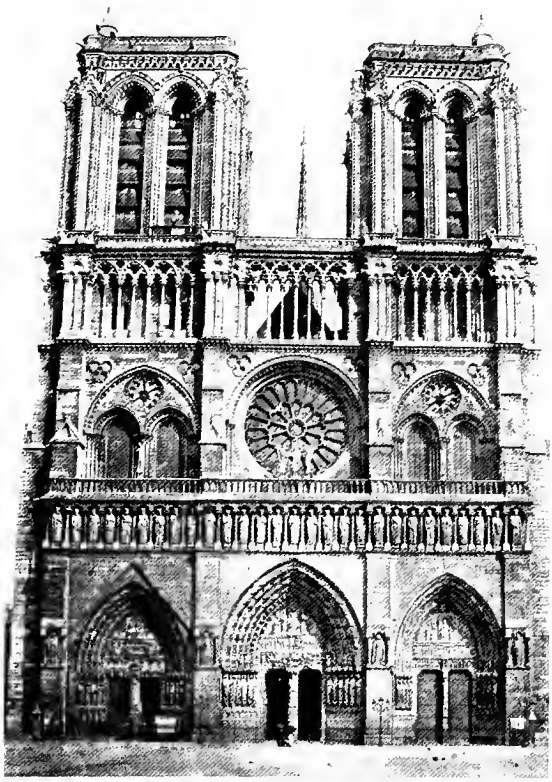
Notre Dame, the cathedral of Paris, embodies the spirit of transitional Gothic even better than some contemporary buildings, for the very reason that it is not homogeneous. One can trace (Fig. 24) a good part of the changes that went on from about 1163, when it was founded.



25—Notre Dame, Paris, seen from rear. (From photo.)

until about 1235, when its façade was nearly completed, with even later peculiarities in the south transept with its portal of 1257. It has the advantage of a splendid isolation by the Seine, which gives full value to its exquisite choir with flying buttresses which are evidently an addition of the XIII century when the chapels were built. Work was begun, as usual, at the choir end (Fig. 25), but we may study the façade (Fig. 26) first because its design is evidently the primitive one, though not carried out until after 1200. It is the most symmetrical of the great Gothic façades. In fact it is the first of the

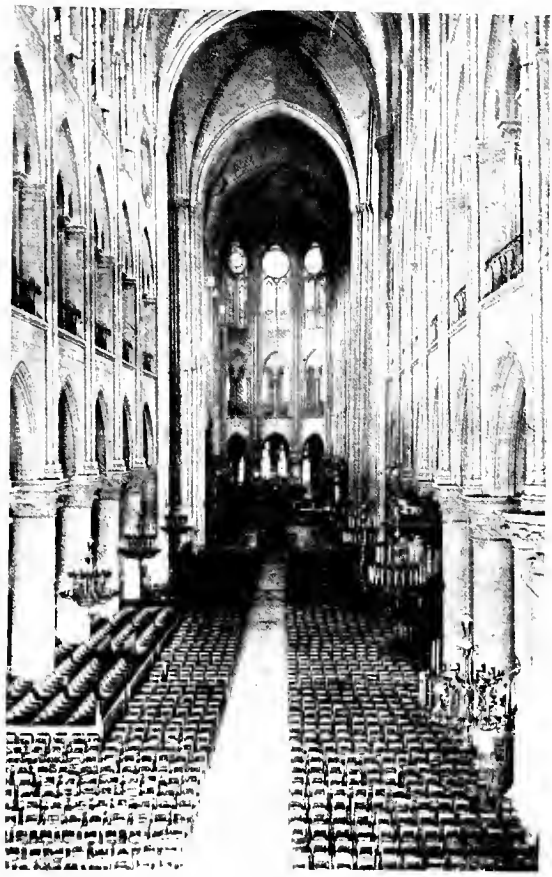
truly Gothic type. As Choisy well remarks, it is based on a square above which rise the flanking towers. The three portals are set in solid masonry and are crowned with the gallery of kings. The buttresses with their offsets are still plain, without the pinnacles, the niches and the surface decoration that are to distinguish XIII century work. For the last time we see uncovered flat wall surfaces. The second story grouping of the windows is certainly finer and more symmetrical than that of the later façades. The open gallery above it is distinctly of later design than the rest, with exquisite shafts: it conceals the gable of the roof of the nave. The lines of the buttress-piers are continued in the towers which still retain the square plan in one unbroken story, with coupled buttress-piers. The church was planned with five aisles but without the chapels which were added between the buttresses c. 1240, using what was otherwise wasted space: one of the earliest cases of what became quite a general way of planning before 1300. Compare the early tracery of the clearstory with the developed tracery of the chapels and the difference in age is evident. This change eliminated from the plan any projection of the short transept. Another peculiarity of the plan is the perfectly semi-circular line of the choir which was more often provided with radiating chapels.



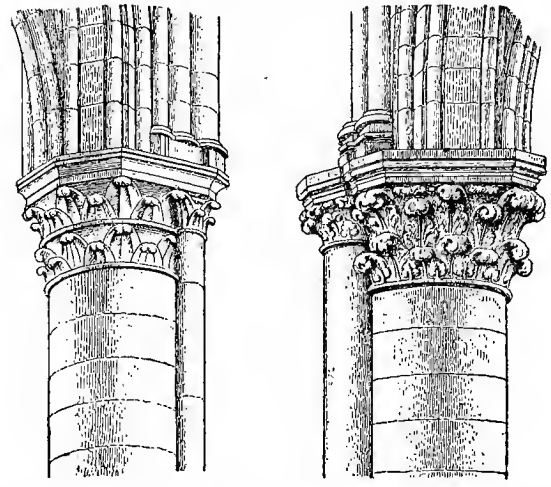
26—West façade of Notre Dame, Paris. (From photo.)

The interior (Fig. 27) is without the soaring qualities popularly ascribed to Gothic, though it is higher than other transitional interiors.

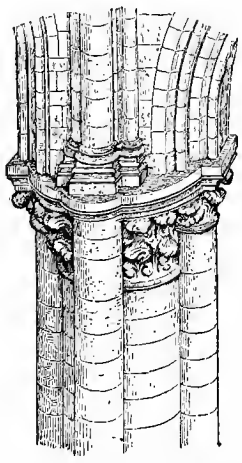
The supports are heavy circular shafts and as they do not alternate with piers it has been suggested that the original plan provided for quadripartite instead of the sexpartite vaults which we see. The change would have occurred in the course of construction. But, as we shall find later, this alternation occurs in the aisles and that may have been thought sufficient. Another interesting peculiarity is the addition of one engaged shaft in the sixth pier from the transept on the side facing the nave, to carry the weight of the shaft of the main vaults. This was in the nature of an experiment; it proved unsatisfactory because while it provided for the most pressing need it was a makeshift (Fig. 28). Consequently the architect in charge built the seventh (Fig. 29) and last pier with four engaged shafts instead of one, so as to meet the minor vaulting shafts of the aisle and the mouldings of the archivolts. Perhaps this was the origin of what became the classic form of pier, used at Chartres, Reims and Amiens. Meanwhile, the form of the sixth pier, with its single shaft, served as the scheme for the interior of the cathedral of Soissons, begun in 1175. Perhaps the most striking feature is the high gallery or second story of the aisle. It is the ultimate expression of this form, which goes out of fashion immediately after 1180. It is interesting to notice that while there is no alternation of heavy and weak supports in the nave, that alternation exists between the side aisles. Choisy keenly remarks that as the



27—Interior of Notre Dame. (From photo.)

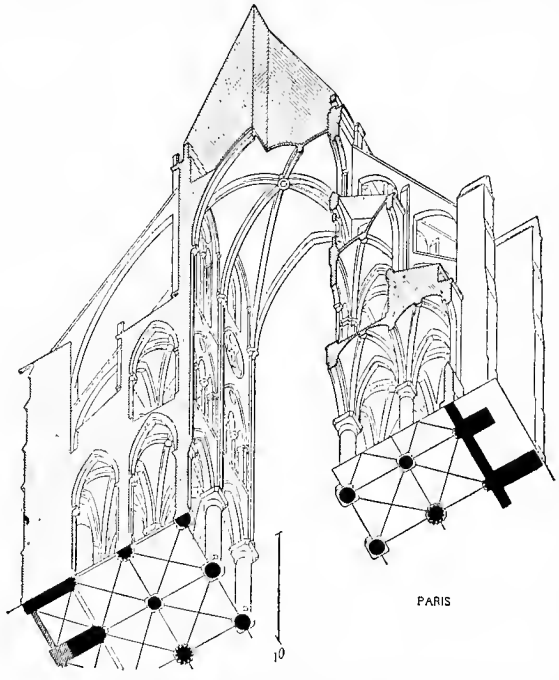


28—Pier of Soissons Cathedral and sixth pier of Notre Dame. (From Moore.)

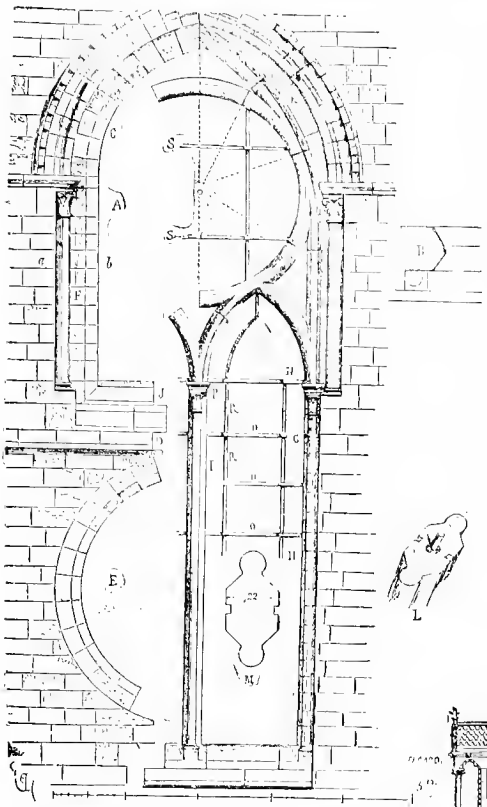


29—Seventh pier of Notre Dame. (From Moore.)

thrust of the vaulting is not vertical, but oblique and outward, it was logical that the piers that most needed strengthening were those between the side aisles. The circular core has a ring of engaged shafts. Some of the differences between the church as first built and as we see it after the changes of the XIII century, are instructive. In the cut (Fig. 30), taken from Choisy, the right-hand half shows the original structure, while on the left we see it as it is. The principal changes are: the substitution of large traceried windows for a rose-window or oculus surmounted by a plain low window (Fig. 31); the use of light one-storied

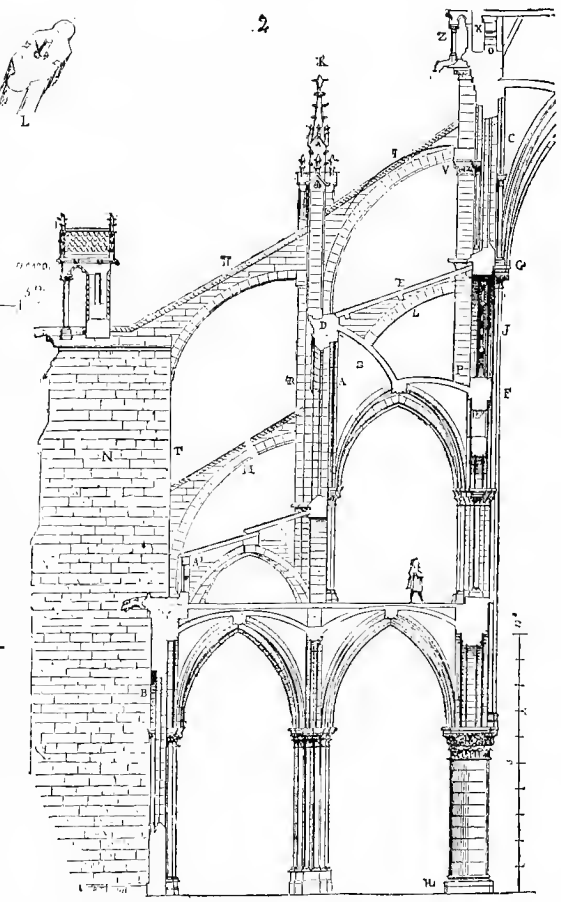


30—System of Notre Dame. Right-hand half shows original scheme of 1163. Left-hand half shows final scheme of XIII century. (From Choisy.)



31—Window of Notre Dame, showing older and later forms. (From Viollet-le-Duc.)

buttresses for the heavier double-batteried structure; the loss of the triforium over the gallery. It is important to bear these things in mind because the student ordinarily concludes that he sees before him, aside from the chapels, the scheme of the twelfth century. The restorations affected the vaulting, which is remarkably perfect and accurate in its construction (Fig. 32).



32—Structural details of nave of Notre Dame. (From Viollet-le-Duc.)

Side by side with Notre Dame one naturally places several churches which duplicate its essential features and in a way are more instructive because they are more homogeneous. These are especially the cathedrals of Laon and Mantes (which is a copy) and St. Leu d'Esserent.

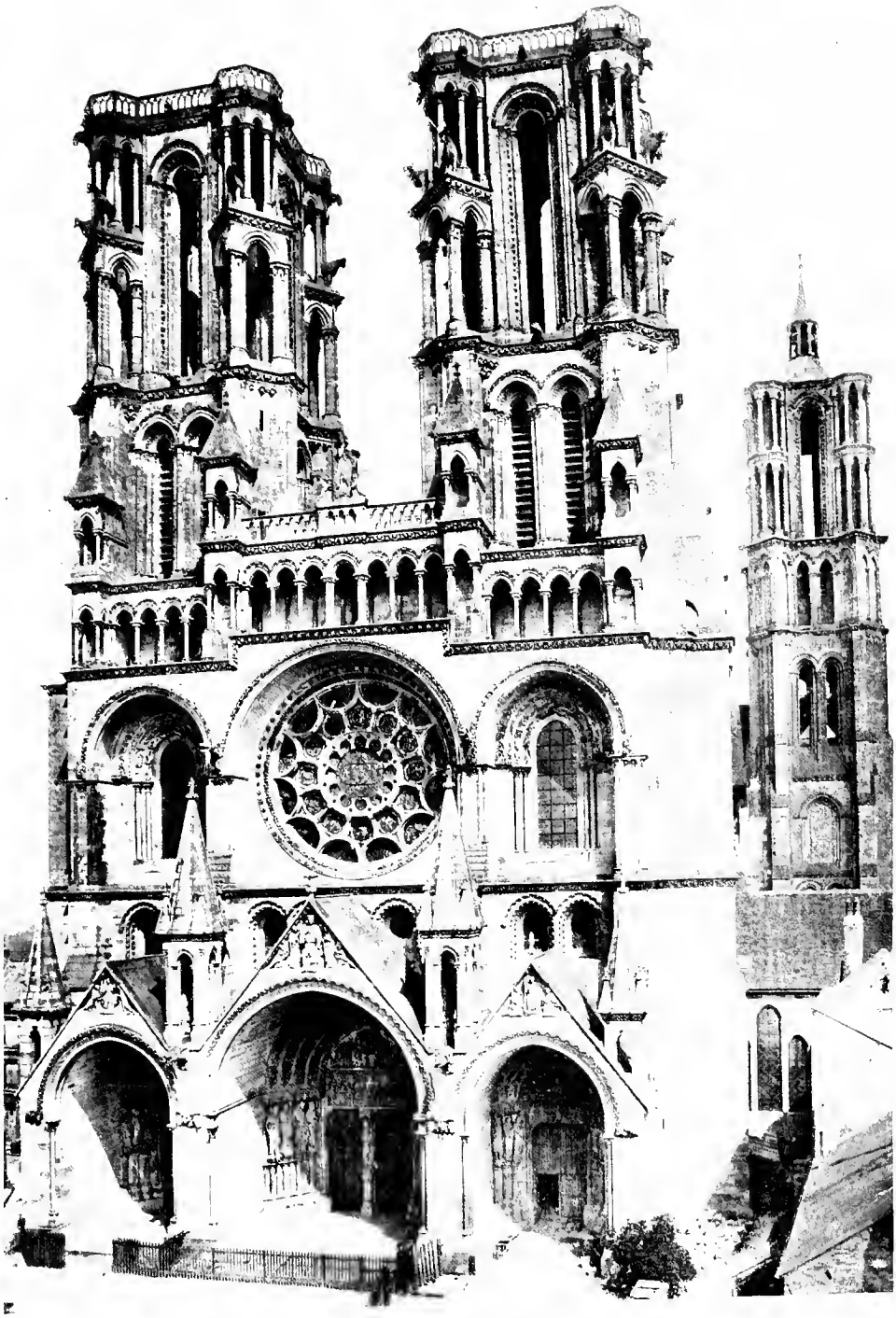
Laon has an interior (Fig. 33) almost exactly the counterpart of Notre Dame in its columnar supports, its splen-

did gallery, its sexpartite vaulting and its grandiose façade. Still there are certain fundamental differences; its long and narrow plan, with only three in place of five aisles; its projecting transept; its square-ending apse. It is interesting to compare the façades. That of Laon (Fig. 34) is evidently the earlier type and less well thought out. The stepping of the upper section of the façade is awkward: so is the line of small windows above the portals. The towers, however, are remarkably fine, and that

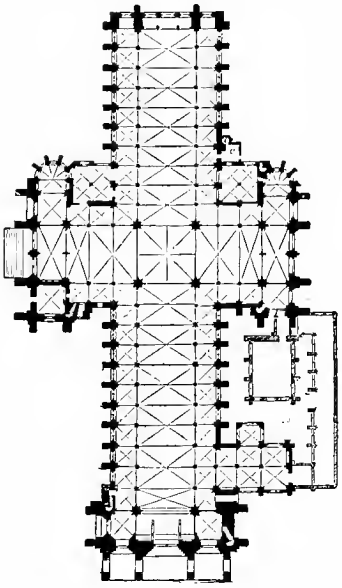
33—Interior of Laon Cathedral, looking west. (From photo.)

they were so considered by the early Gothic builders themselves is shown by the sketch made of one of them by the architect Villars de Honnecourt before 1250: he declares them incomparable. They give a type later and more beautiful than that of the towers of Notre Dame, partly because they are developed on an octagonal instead of a square plan. In certain features the interior shows a fine richness: in the transept, for instance (Fig. 35), and the piers with eight detached shafts (Fig. 36).

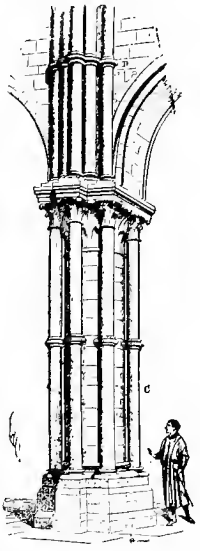
St. Leu d'Esserent not only stands very close to the older parts of Notre Dame but, though small, is so homogeneous as to be exceed-



34—Cathedral of Laon, west front. (From photo.)

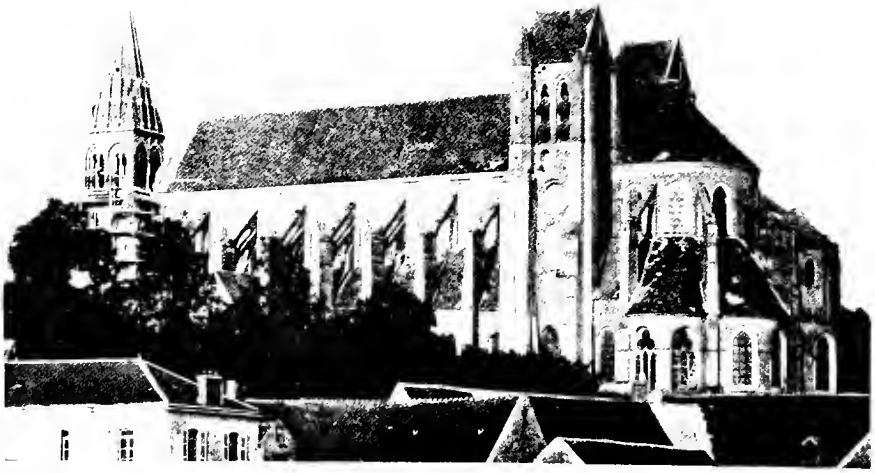


35—Plan of cathedral of Laon. (From Viollet-le-Duc.)



36—Pier with detached shafts in the cathedral of Laon. (From Viollet-le-Duc.)

ingly valuable for comparative criticism. The choir and transept date from about 1170, and do not yet show any tracery in the windows. The nave must belong to the close of the century and is particularly interesting for its windows with almost the first attempt at tracery,



37—St. Leu d'Esserent, from the rear. (From photo.)

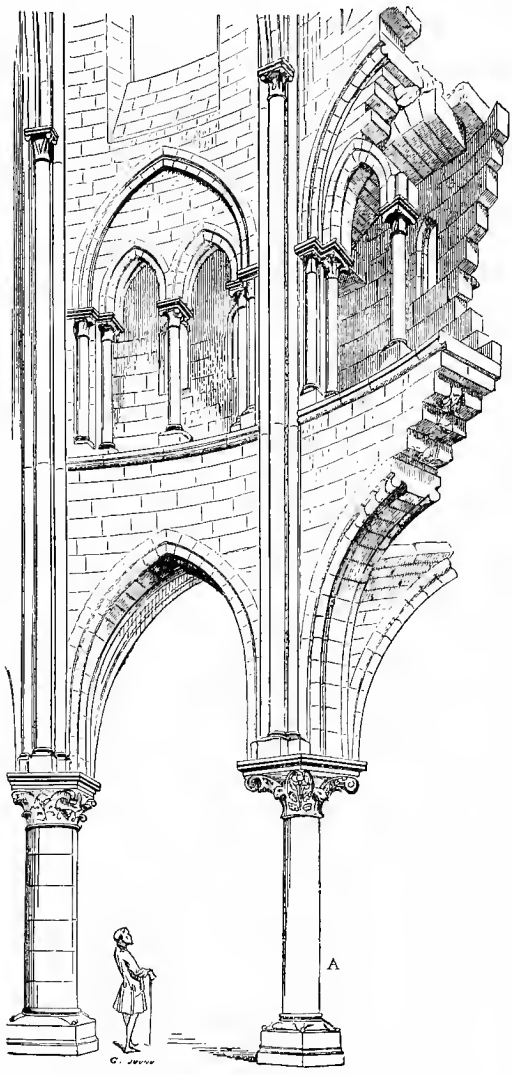
and the buttresses with double ramp, but still perfectly plain. Fig. 37, though on a small scale, will show the character of this plain but symmetrical and logical structure. The windows are still disjointed in this first composition of the cinq-foil oculus in the field over two lancet windows enclosed by a pointed arch. It is still plate tracery and is interesting to compare with the windows of the nave of Notre Dame, where bar tracery is introduced into the design, which is the same except that all the elements have been welded together. The buttresses are probably similar to the original ones of Notre Dame. The delicacy of the interior is shown in Fig. 38, which has more charm than the larger church. In Fig. 39, taken from the choir, this will appear even more clearly.

38—Interior of St. Leu d'Esserent. (From photo.)

As for the Cathedral of Mantes, already referred to as practically a reduced copy of Notre Dame, it represents of course the later phase of the original and need not detain us except to note that instead of a uniform use of the column to divide nave and aisles it has alternate columns and piers, to coincide with the sexpartite vaulting.

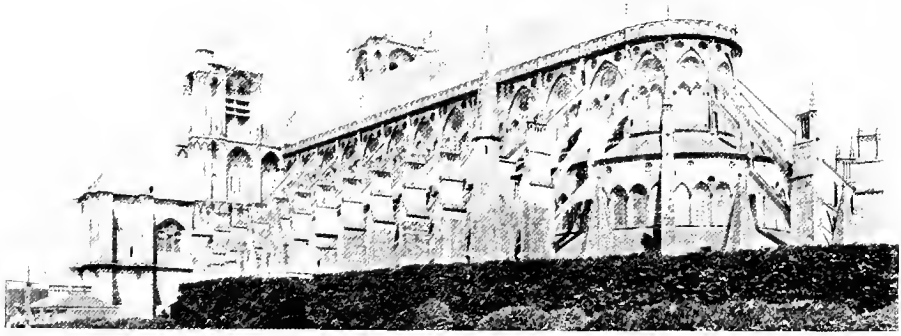
After Notre Dame the great cathedrals in which architectural development is best illustrated for the half-century from 1190 to 1250 are: Bourges, Chartres, Soissons, Reims, Amiens, Le Mans, Auxerre, Troyes and Beauvais, with certain other contemporary masterpieces that are not cathedrals, such as St. Yved at Braisne and St. Urbain at Troyes. In all these works Gothic art shows that it has successfully completed its attempt to create both a logical constructive system with a minimum of material and a maximum of strength, and an æsthetic system in perfect harmony with this construction and with the intellectual and spiritual temper of the age. The period of experimenta-

tion and of transition has been left behind. The solution reached through the leaders was adopted by the rank and file with amazing unanimity and enthusiasm, and great unity resulted in style.



39—Ambulatory of choir of St. Leu d'Esserent. (From Viollet-le-Duc.)

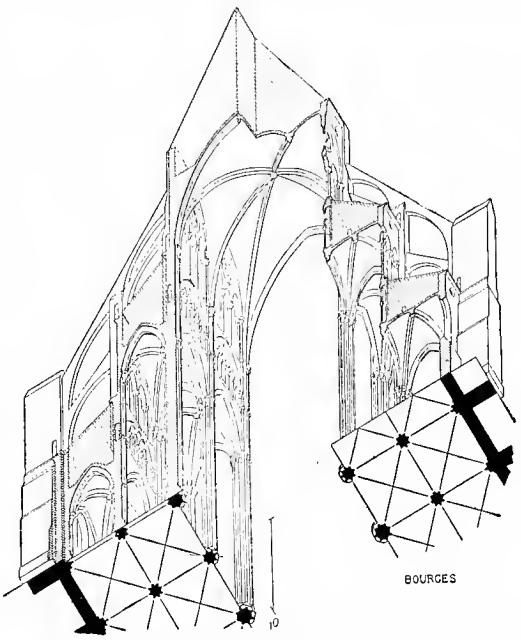
Bourges cathedral, begun between 1170 and 1180, is in some ways earlier, in others later than Notre Dame. It connects the type of Senlis with those of Chartres and Meaux. This is especially evident in the façade, the centre of which is occupied by an enormous pointed window and below by a magnificent group of five sculptured portals in place of the customary three. The view of the exterior from the choir end given in Fig. 40 is quietly harmonious and stands midway between the plain transitional type illustrated in St. Leu d'Esserent (Fig. 37) some twenty years earlier, and that of the thirteenth century at Reims or Amiens. We can see in the tracery of the windows, the tendency toward the unity of design of Reims and Amiens. Bourges is, in fact, the last great work of the twelfth century, whereas Notre Dame embodies in some parts that of the thirteenth, especially in the remodelled sections. The five-aisled scheme is still followed at Bourges and the vaulting remains sexpartite: also, the choir outline remains semicircular. These are conservative traits. On the other hand, the



40—Cathedral of Bourges, from the rear. (From photo.)

transformation of the lower portion of the main support from a cylindrical shaft to a bundle of mouldings that carries the vaulting shafts to the ground level, is an innovation that first appears here and in a more logical and advanced form than was afterward used in most of the masterpieces of the thirteenth century. It has eight auxiliary shafts instead of the four used at Chartres, Reims, Amiens, Beauvais, etc. This richly featured pier was tried, a few years later, in the choir of St. Yved at Braisne, a charming work otherwise modelled on Laon. It was also used, in the last decade of the century, at the cathedral of Meaux, throughout the building.

There is also in the interior of Bourges a curiously tentative preservation of the gallery over the aisles, which heralds its complete disuse. By pushing it so far up and making it practically a triforium instead of a second story of the



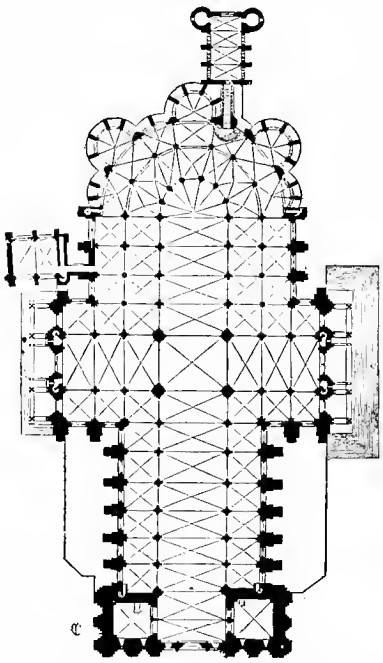
41—System of Bourges cathedral. (From Choisy.)

aisles, the architect changed the entire proportions of the interior, because he increased enormously the height of the nave arcade and of the aisle vaults. A glance at Fig. 41 from the invaluable Choisy series shows all these points. We begin now to see the soaring proportions

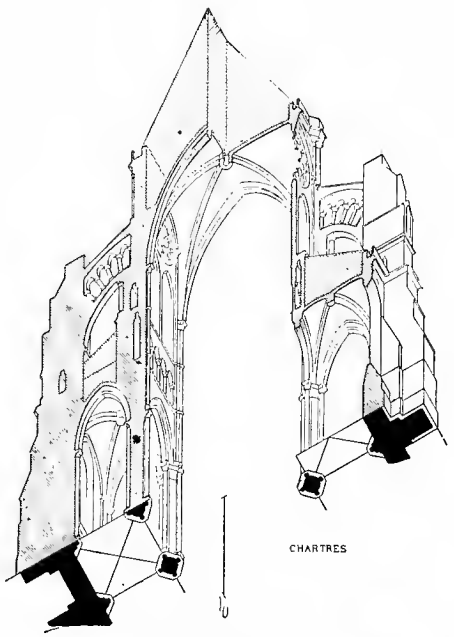
42—Interior of Bourges cathedral, seen from ambulatory of choir. (From photo.)

of the thirteenth century. It was a splendid attempt, but its proportions were not repeated in the relation of the parts. It remained in this a solitary work of genius, the beauty of which can be seen in the view from the choir in Fig. 42.

The most striking originality is shown in the cathedral of Chartres, begun after a fire in 1194 and built with such rapidity that the choir was consecrated in 1198, the transepts almost completed in 1212 and the structural body of the church shortly after 1220 (Fig. 43). It has the unity lacking at Notre Dame, and springs from the brain of an architect of genius who understood how to use the local coarse stone for massive effects. In the section of Fig. 44, in the view of the



43—Plan of cathedral of Chartres.
(From Viollet-le-Duc.)

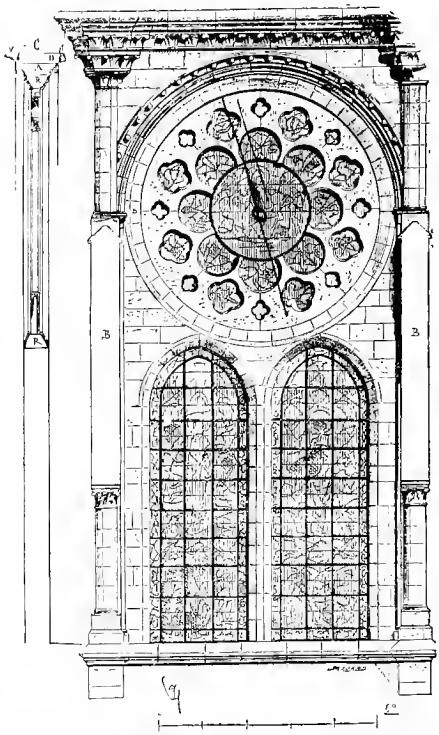


44—System of cathedral of Chartres.
(From Choisy.)

interior in Fig. 45 and in the clearstory window in Fig. 46, the main characteristics can easily be seen to be: the massive but superbly articulated buttress piers; the double buttress arches with their unique arcade; three in place of five aisles; the central shaft reinforced by four colonnettes as a pier; the quadripartite in place of the sexpartite vault; the absence of domical curves in the vaulting compartments; the imposing roses in the clearstory; the suppression of the second story over the aisles. The originality shows itself also in the smallest details. In the main supports, for example, every other pier consists of an octagonal central column surrounded with four round shafts, while the intermediate pier has four octagonal shafts around a circular column.

This is shown even better in Fig. 47 with its charming view of aisles and transept. This alternation is carried out in the grouped vaulting shafts that spring from the abacus of each pier. Fig. 48 gives details of the buttresses.

The façade (Fig. 49) is not as advanced as the interior because part of it remains from the earlier church destroyed by the fire of 1193. The triple portal is the most important remaining group of the sort and will be described under Sculpture. It is the prototype of the richer works of the developed period and is perhaps the finest instance of the subordination of figures to architectural line. The two towers are



46—Clearstory of nave, cathedral of Chartres. (From Viollet-le-Duc.)

45—Nave of Chartres cathedral. (From photo.)

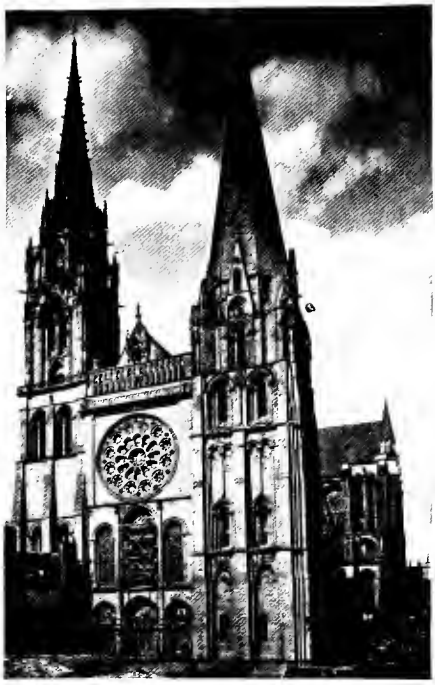
47—Cathedral of Chartres, view through aisle across transept. (From photo.)

particularly interesting to both the student and the craftsman. That on the right belongs to the older church and is one of the two or three most artistic examples of the late Romanesque spire. It is massive without heaviness. How this type developed is shown in Fig. 50 where the spire of the Cathedral of Senlis is given, which was added to the church toward the middle of the thirteenth century. Here and at Chartres the

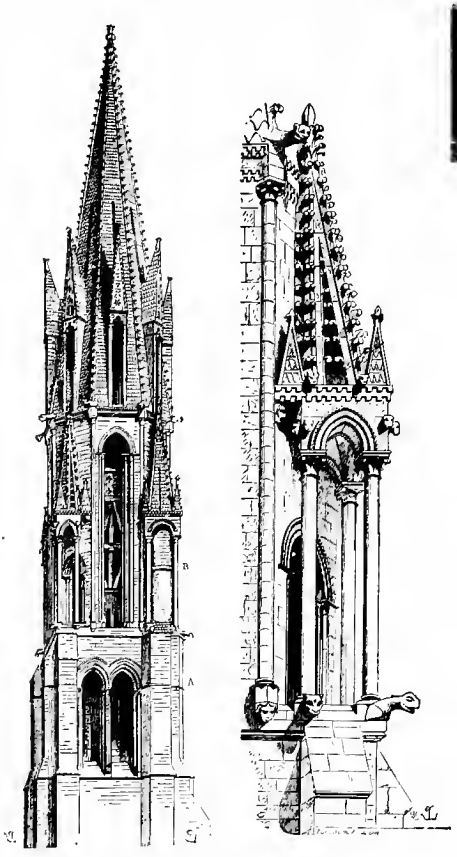
48—Flying buttresses of Chartres cathedral. (From photo.)

passing from square to octagon at the base is most cleverly managed and supplemented by the pignons and dormers addorsed against the sides of the upper part of the spire. It is a most original design, developed at Senlis into forms of aspiring delicacy. Returning to the Chartres façade, the tower on the left (north side) had remained unfinished until the close of the Gothic age, and was completed in 1515

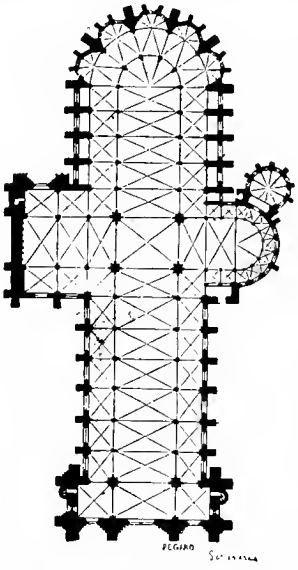
in the flamboyant style quite out of keeping with the rest of the façade but in itself extremely artistic. The plan of keeping the tower design intact, separate from the façade, is a scheme largely abandoned in later designing but which appeals by its logic. The central buttress in the towers is also an unusual feature. There is as yet no projecting porch, and the large rose-window is not yet brought down to where we find it at Notre Dame and Laon, and



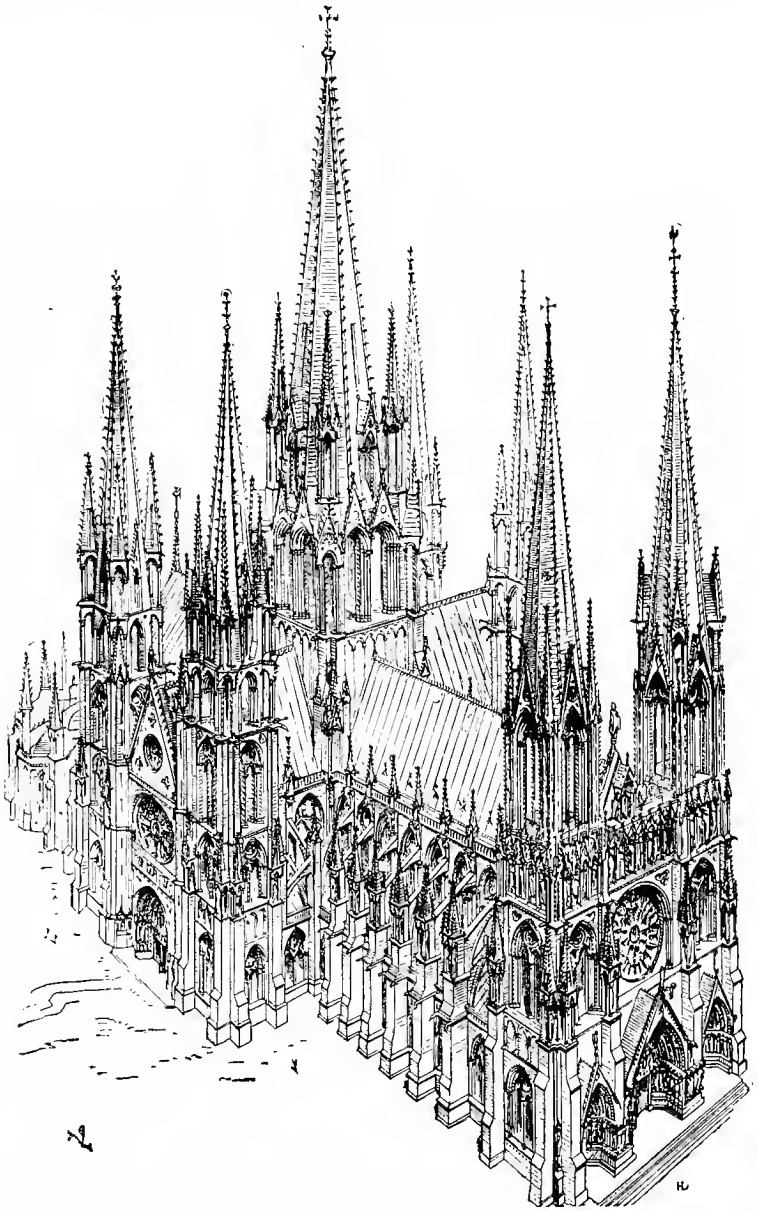
49—Cathedral of Chartres, west front.
(From photo.)



50—Tower of cathedral of Senlis, with detail.
(From Viollet-le-Duc.)



51—Plan of Soissons cathedral.
(From Viollet-le-Duc.)

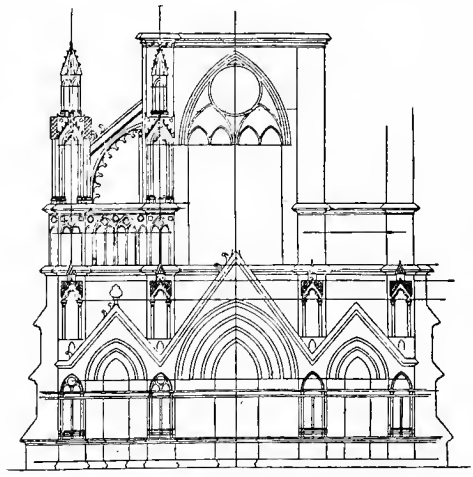


52—Restored view of cathedral, Reims, as it was in the Thirteenth century. (From Viollet-le-Duc.)

its sustaining group of three large pointed windows shows a designer halting between two central focal points for his façade and so represents an earlier stage than the Notre Dame façade.

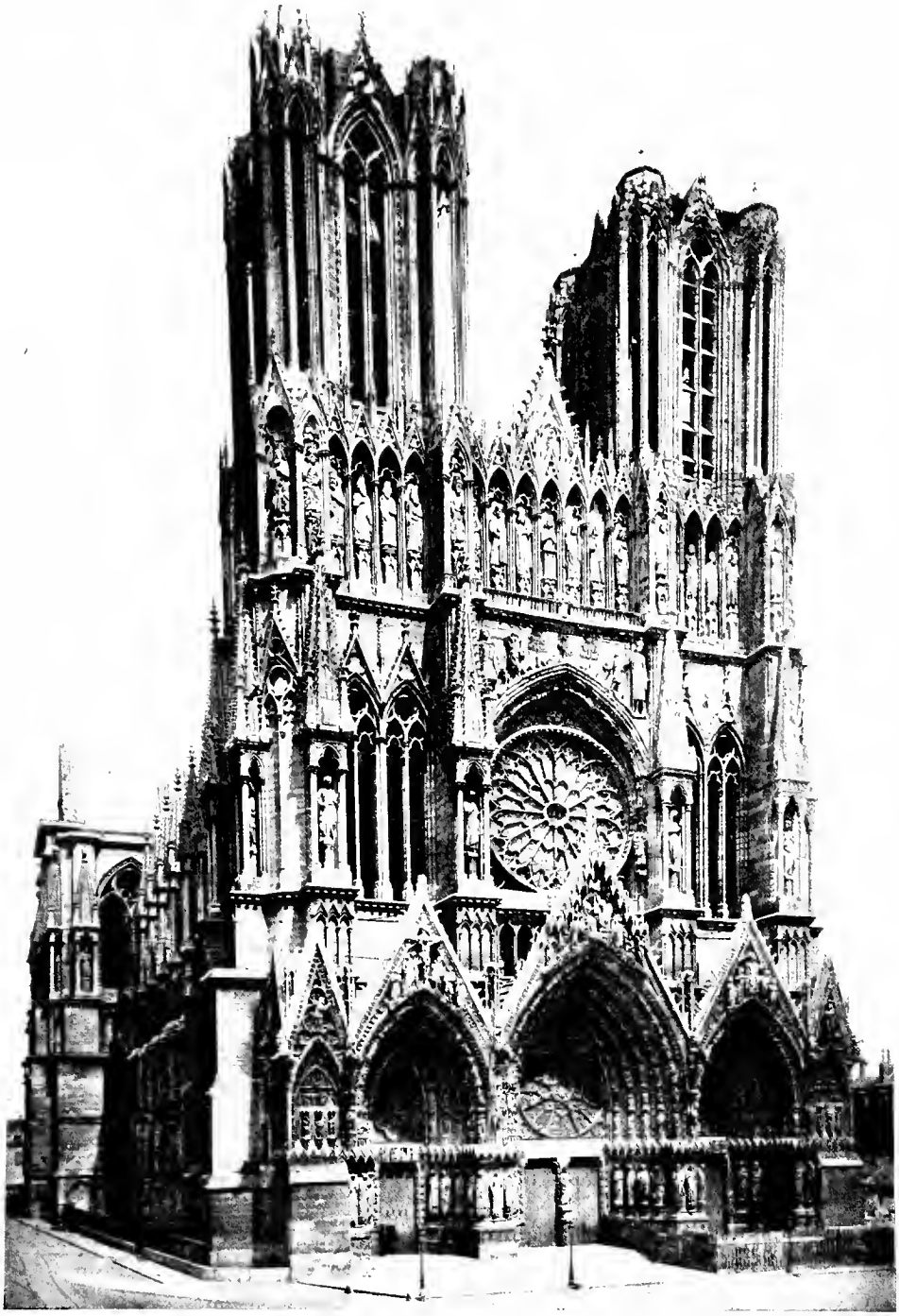
The architect of Chartres seems to have given the classic model

which was followed merely with such stylistic changes as would naturally occur in consequence of the continuous desire for greater delicacy and lightness. Soissons cathedral (before 1212) in certain parts harks back to earlier schemes; as in its main supports which are transitional between Notre Dame and Chartres, because the central circular column is reinforced merely by a single shaft facing the nave (Fig. 28). But the buttresses are double-arched as at Chartres, and the plan has only three aisles for both nave and choir. A peculiarity of the plan is the semicircular choir-like ending of the transept on the south side (see Fig. 51), with its aisle. The construction began at this point, toward 1175, and it would seem as if the intention of the architect was to end both transepts in a semicircle, as had just been done at Noyon (but without aisles). Then a new architect came, or at least a new and larger plan was adopted which sacrificed the symmetry of this part of the building and broadened the transept on the other side.



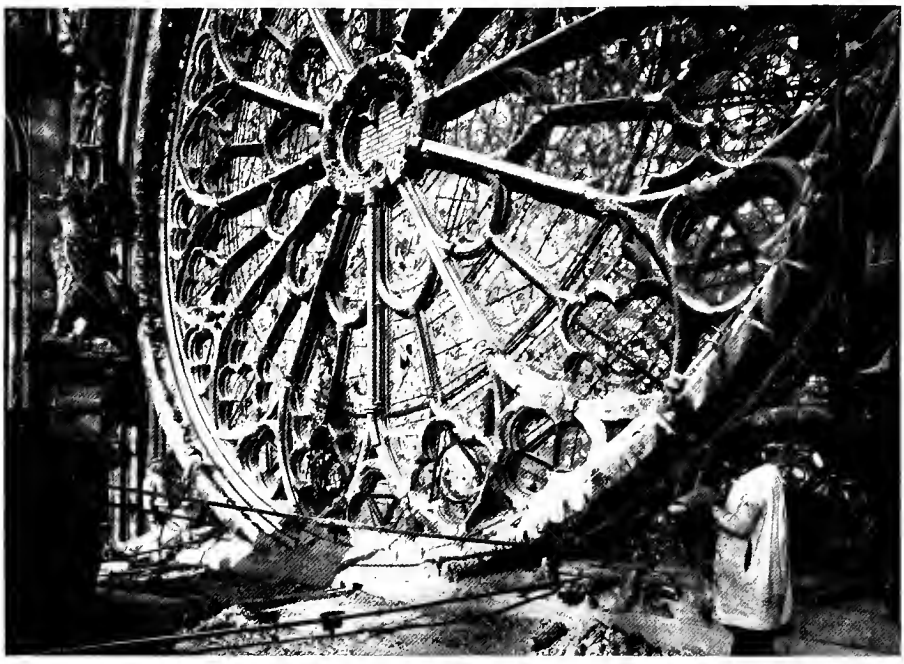
53—Drawing by architect, beginning XIII century, for façade cathedral of Reims. (From Choisy.)

We now pass quite beyond the Ile-de-France into the neighboring province of Champagne, to a school dependent largely on the Notre Dame and Chartres schools but with an added splendor, a love of classic beauty and a joy in the freest expression of life. I mean Reims cathedral, the grandest work of Gothic art. Viollet-le-Duc has given in Fig. 52, a restoration of the building as the architect planned it and as it existed before its spires were burned down. I give in Fig. 53 an original drawing for the façade, a *projet* of c. 1211. The architect of Reims preserved in his façade the scheme of Notre Dame, which had not, however, been actually carried out when the design for Reims was made in 1211. From what we know of the custom of the Gothic architects of making sketches and drawings before the work was begun, which were presented and discussed, it is evident that the architect of Reims could make use of the Notre Dame plans even before execu-



54—Cathedral of Reims, west front. (From photo.)

tion. One notices, however, two important changes. The portals are made to project strongly beyond the line of the façade and even of the buttresses and are crowned by gables. These gables are a later addition; as well as the smaller end gables which crown the base of the corner buttresses, and a few other parts of the decoration. In this feature the influence of Laon (c. 1192) is evident. The second difference is the suppression of the gallery of the kings above the portals and the transfer of its line of statues to the lofty arcades at the

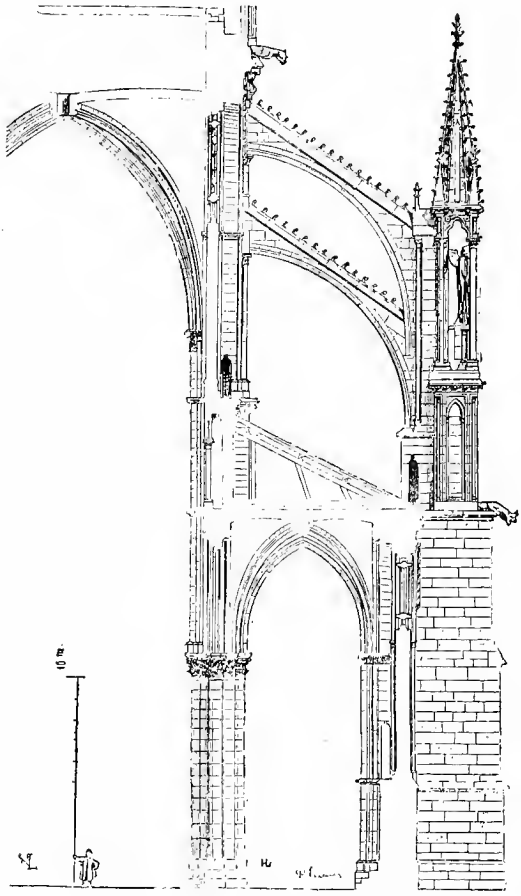


55—Rose window, west front, cathedral of Reims, in process of restoration, showing erosion of stonework. (From photo.)

base of the towers. Here again the Laon type is followed. The other differences are merely due to the natural evolution of the style which tended toward the substitution of openings and decorative details for plane surfaces. Notice the suppression of the wall over the portals, the false arcading, the pinnacles and the niches for statues on the buttresses, the use of the pointed in place of the round arch as a frame for the wheel window, and the development of tracery and decorative detail at every possible point. There is a perceptible lightening of the upper story of the towers, where the incredibly slender shafts of the corner pinnacles have a similar effect to those on the Strassburg

56—Interior of Cathedral of Reims. (From photo.)

façade. The general view in Fig. 54 is on the whole more harmonious than any other of the great cathedrals and the wealth of its sculpture is not obtrusive. In speaking of sculpture the extraordinary interest of all this part of the exterior will be discussed: in this alone it has no equal in Europe. The recent restorations have afforded a unique

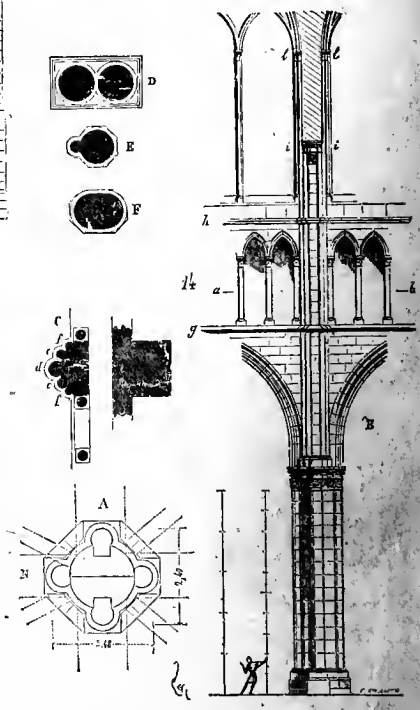


57—Section of nave of Reims cathedral. (From Viollet-le-Duc.)

as standing midway between Chartres and Amiens in its proportions. The piers are heavier than at Amiens. In the triforium gallery the same type is used as at Chartres and Soissons: there is no subdivision by a central shaft nor enclosing of the arcades by an arch with traceried tympanum. We have a sense of virility and robustness which distinguishes from the grace of Amiens as we pass up to the feeling changes.

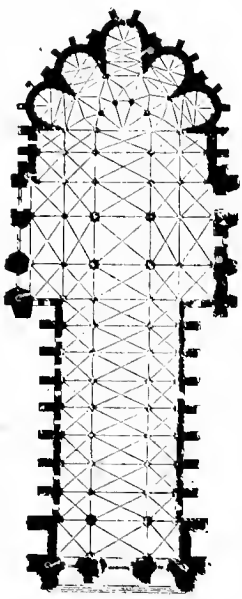
opportunity to photograph details. I give in Fig. 55 a remarkable view of the great wheel window showing its condition before and during restoration. Here and at Amiens we see the efflorescence of the early and simple form of bar tracery developed out of the plate-tracery which was given up soon after c. 1200. For the buttress system and windows see Fig. 118; for the roof, Fig. 240; for a gable, Fig. 236; for a capital, Figs. 210–2.

The interior of Reims impresses (Fig. 56) at first

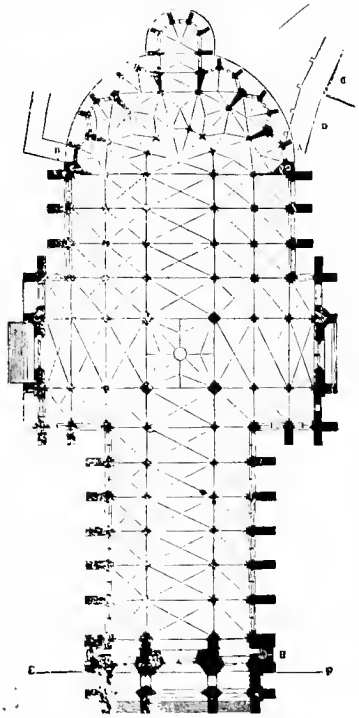


58—System and details of nave of Reims cathedral. (From Viollet-le-Duc.)

The design, to be sure, is the same as at Chartres, a division of the window into two sections, in place of the four at Amiens, but in the execution the effect of extreme highness is given by the men who carried out the 1212 design in the manner of c. 1250-1275. This coincides with an extreme lightening of the wall structure, which is thinner even than at Amiens. The main vaults, also, are raised very high and



59—Plan of Reims cathedral.
(From Viollet-le-Duc.)

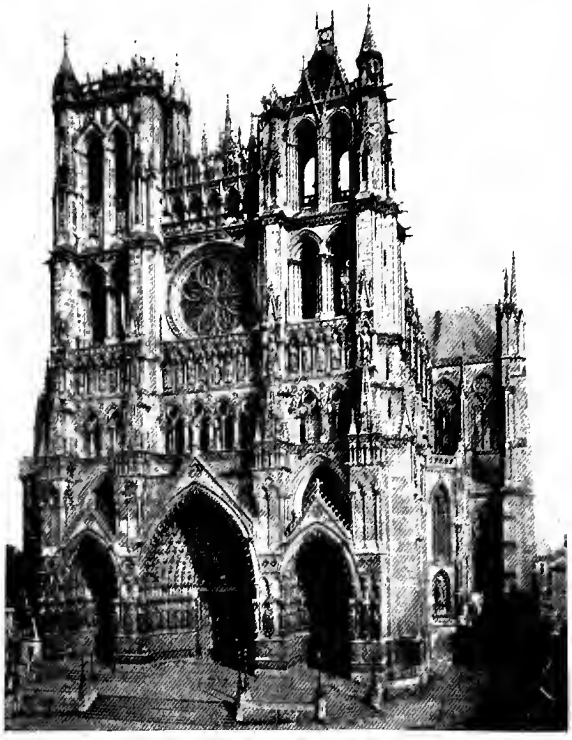


60—Plan of Amiens cathedral.
(From Viollet-le-Duc.)

the roof is steep. The vaulting compartments are more inclined and the transverse and wall-ribs very pointed. These are late characteristics and show that the detailed drawings for the section of the upper structure must be referred to the middle of the century instead of to the 1212 period. These traits appear in Figs. 57 and 58. Fig. 59 shows the importance of the nave. Merely as a piece of construction the building is considered to be easily the greatest in Europe. Nothing has sunk, shifted or split to any perceptible extent.

At Amiens (Fig. 60) the style is conceded to have reached its apogee, and one may freely grant this of its general scheme, its interior

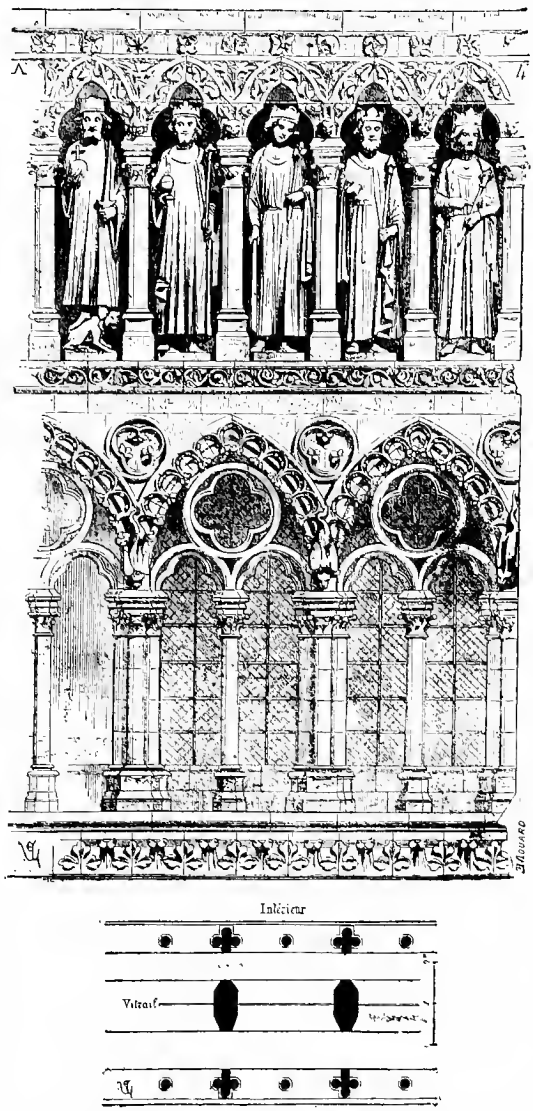
and its choir. The façade of Amiens is a development of an original design (Fig. 61) that combined features of Laon and Notre Dame. It is less rich than Reims and like it has parts that belong to the fourteenth century or later. The increased height favored the insertion of a rich gallery (Fig. 62) between the portals and the gallery of the kings. The intricately designed rose-window and the upper story of the left-hand tower are among the latest parts. From the architectural point of view the lower section is superior to Reims because the buttresses are not concealed by a screen of sculpture which breaks the strength of the vertical lines, and there are no over-rich gables. Yet there are grave defects which make me consider it, contrary to the general verdict, as a work of less genius than the Reims façade. Not only are the towers lacking in symmetry but the breaking of the design into two fairly even stories makes them ineffective. It is true that the flamboyant gallery that connects them and their flamboyant ornamentation and balustrade have helped to traduce the original effect. Still the rather heavy design of the open gallery under the gallery of the kings must be considered original. As a pure expression of a master mind the Reims design is superior, even though overlaid with florid superfetations which vitiate it at some points.



61—Amiens cathedral, west front. (From photo.)

In its general external lines Amiens gives the effect of compactness and elevation, because of its greater proportionate width and height when compared with all previous churches. This helps to give it the

commanding aspect so characteristic of Fig. 63. Its apsidal arrangement, with polygonal radiating chapels is more picturesque than the earlier unbroken circular line typified in Notre Dame. This is increased by the greater size of the central or Lady Chapel. Of course this use of polygonal chapels was an old one, quite popular in certain Romanesque schools: after the time of Chartres it became the Gothic norm, the main variation being that in some cases (at Chartres and Rouen, for instance), the chapels are not contiguous as they are here at Reims. Fig. 64 gives a general view of the interior.



62—Plan and elevation of Gallery of Kings, Amiens cathedral. (From Viollet-le-Duc.)

The interior of Amiens is the standard of Gothic perfection. The plan is practically the same as at Chartres and Reims: a three-aisled nave, short transept with aisles, five-aisled choir with radiating chapels. The five-aisled nave is, therefore, definitely discarded, and the nave has six bays, like Chartres, instead of nine as at Reims, and this similarity to Chartres is accentuated by the size of the choir (Fig. 60). Contrary to usage, the nave was the earliest part of the church to be built and it was exactly contemporary with that of Reims. In its scheme it is the same, but its proportions are much slenderer. The piers are elongated,

raising the arches and the aisle-vaulting very considerably. Their plan is identical: a central round column with four engaged shafts; but the vaulting shafts are in groups of three in place of five and there is no capital to break the verticality of the central shaft. The triforium is the same except that it also is elongated. The clear-story design is the same (Fig. 65), also with the two-storied flying buttresses, but the buttress piers are more heavily weighted and the upper battery abuts against the nave wall at a lower point than at

63—Cathedral of Amiens. View showing how a French cathedral overshadows the city. (From photo.)

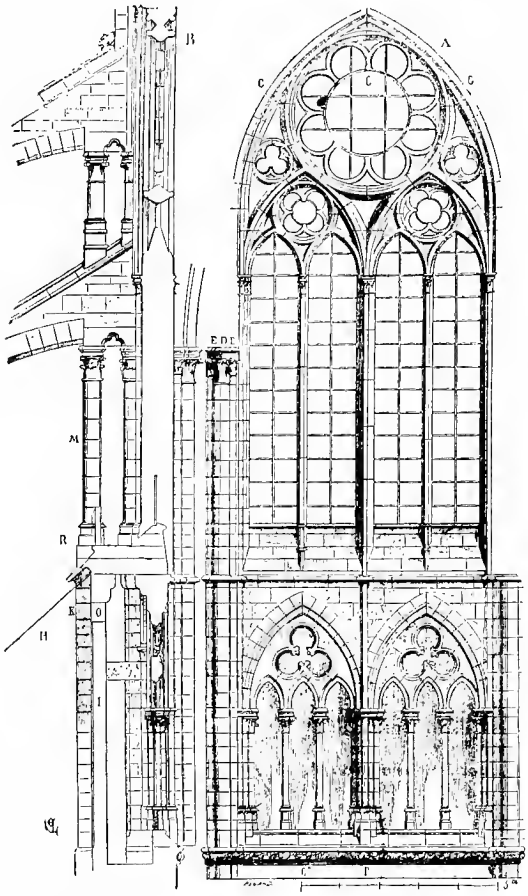
Reims and this seems more logical. A further weighting is secured by corbelling out the pier over the wall of the aisle. The only detail in which Reims has more of the element of upward sweep that we associate with developed Gothic, is in the lines of the main vaults which are much more pointed than at Amiens.

We must not forget that the long lines of side-chapels that flank the aisles of the nave were an addition made long after construction in order to utilize the vacant spaces between the buttresses, a fashion first set c. 1240 at Notre Dame. We have now reached the choir, which was built in about 1250 by Thomas de Cormont, in a style slightly more

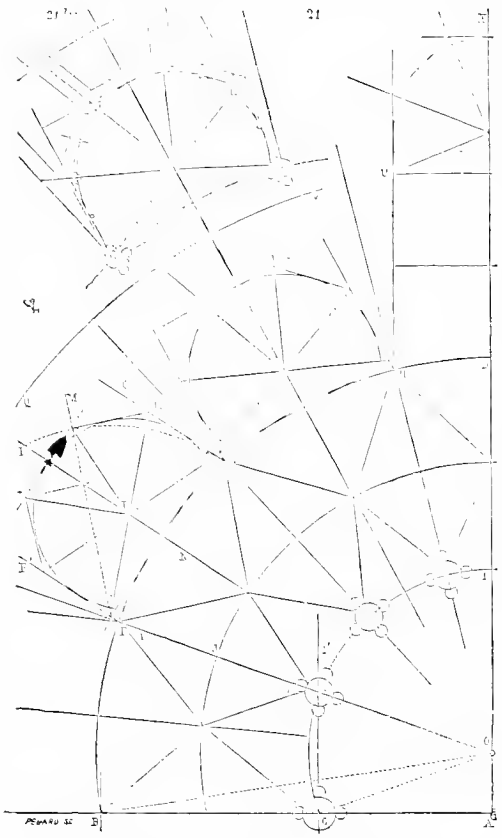
64—Cathedral of Amiens. Interior. Nave from west end. (From photo.)

advanced than the nave and on a geometrical basis laid out in Fig. 66.

The apse of Amiens is the first which may be considered as final in structure and form. The scheme of Chartres is here brought to completion, as Mr. Moore has shown, by making the choir-plan a polygon of seven sides in an arc of something *over* a half-circle, so that the quadripartite vaulting, adopted at Amiens as it was in all thirteenth century buildings, was brought into perfect union with the vaulting compartments of the apse. (In Fig. 67 the left-hand half gives the scheme of the nave; the right-hand half that of the choir.) Two differences strike one immediately in this drawing. The first is the change in the buttresses: a single replaces a double arch, and in order to elongate the surface of pressure without giving too much weight the flying buttress is pierced with openings; here again we see the influence of Chartres. The decorative possibilities of the buttress piers are also utilized to the fullest extent. The second difference is in the triforium. The architect was not satisfied with having here a line of dark arcades opening on a blank wall under a pent roof; which had been the previous solution, illustrated in the nave itself, as well as at Reims, Chartres, etc. The craze for extending the light-giving stained-glass surfaces led him to make of this triforium of the choir a secondary clearstory, under the main windows and adjusted to them,

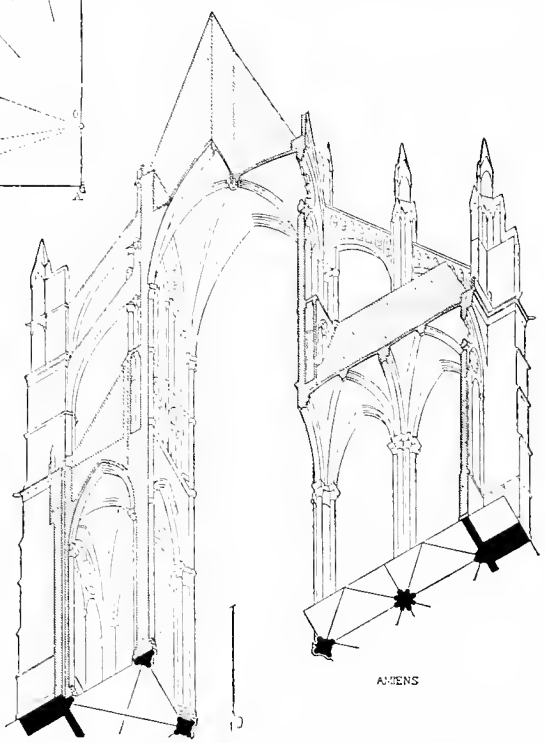


65—Gallery, clearstory and buttress scheme, Amiens cathedral. (From Viollet-le-Duc.)



66—Geometry of plan of choir of Amiens cathedral. (From Viollet-le-Duc.)

by using a series of ridged roofs at right angles with the nave, with valleys at the buttresses to carry off the water. It was a solution æsthetically beautiful but constructively vicious, as it led to grave danger from imperfect discharge of rain water. On account of its addition, however, to the beauty of the interior this open and glassed triforium was adopted in numerous buildings, especially in the region around Paris and in Champagne. It is found, for example, at St. Denis and the cathedral of Troyes. It is the second step in the transformation of the triforium, which had been of use in its original Romanesque (esp. Norman) form of a wide gallery or upper aisle, but seemed without logical use as a narrow line of quasi-blind arcades, which were retained, in Choisy's opinion, not for use but to mark the scale of the building:



67—Scheme of Amiens cathedral, both nave (left) and choir (right). (From Choisy.)

that is to give it greater apparent size by increasing the number of linear units.

It is natural in connection with Amiens and Reims to allude to Mr. Goodyear's remarkable discoveries, though they have a far more general application. I refer to his theory as to certain architectural refinements which, if it is true, raises the art of building to an even higher plane of artistic and scientific attainment. He believes that Gothic architects in planning a building did not plan it mechanically in horizontal and vertical lines, by plumb and chain, but that they arranged for curves in plan and in elevation, for deviations from the straight line, in order to produce certain effects of perspective, to correct certain disagreeable optical illusions or to create certain other agreeable illusions. Mr. Goodyear's contentions are supported by a large number of special photographs in which the plumb line and the surveyor's chain are made to prove them. What particularly interests us is what he calls the 'widening refinement,' as it is exemplified at Reims and Amiens. As Reims is a perfect instance of structural solidity it is interesting that the widening should be greater here than at Amiens. From the ground to the capitals of the main arches the piers are perpendicular: from the capitals to the springing of the vaults the deviation is of about eight inches at the height of the capitals, increasing to fourteen inches at the top of the clearstory windows. This makes the nave 28 inches wider at the top from this reason. The widening is not in a curve but in a straight line, though it would appear as if this juxtaposition of two straight lines at a slight angle gives the impression, at a distance, of a curve. Had the widening been due to shifting or settling after construction

68*a*—Widening refinement of nave of Reims: see plumb line on left side. (From Mr. Goodyear's photo.)

through vault-pressure, there would be fissures in the vaults 28 inches wide! (Fig. 68*a*.)

A second refinement is the corollary and result of the first. It is a curvature in plan. This is also very prominent at Reims. As the big piers at the transept are absolutely perpendicular and as the tower piers at the entrance have an inclination of only four inches, whereas

68*b*—Curve in plan of gallery of Reims cathedral: see surveyor's chain. (From Mr. Goodyear's photo.)

69—Aisle of Rouen cathedral, with plumb line on right, showing widening refinement. (From Mr. Goodyear's photo.)

the inclination in the centre of the nave, where the widening is greatest (10 inches, including 2 inches offset), it follows, if the widening was planned and not accidental, that the wall of the upper part of the nave would show a slight convex curve, more pronounced toward the transept, less pronounced toward the façade. In Fig. 68*b*, which shows the wall-plan at the base of the clearstory windows, a surveyor's chain

stretched from end to end, shows *a curve of ten inches*. This is exactly repeated in the corresponding wall on the opposite side.

To a less degree the same thing is repeated at Amiens, where settling has made the fact a trifle less uniformly evident. But Fig. 64 shows the widening in the nave very clearly.

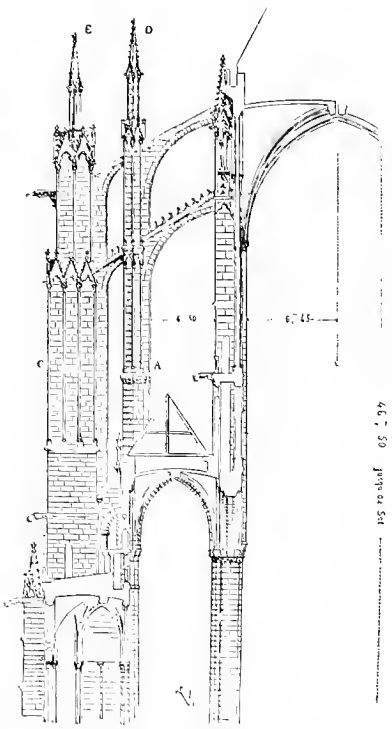
These widening refinements at Reims and Amiens commenced only above the capitals at the main supports of the nave. But Mr. Goodyear found in other buildings that the deflection from the vertical began at the pavement to be continued in a straight line to the vaulting. Of his examples I shall refer only to two, both at Rouen, the cathedral and the church of St. Ouen, the former being illustrated in Fig. 69.

There has been considerable scepticism among scholars not as to the actual fact that these deviations occur, but as to their being intentional. I do not believe this scepticism to be justified. While it is probable that certain instances should be eliminated as due to accident, to settling, to pressure, etc., enough remain which are not only intentional but seem based on a rational principle, which underlies buildings earlier than the Gothic style. In fact these or corresponding deviations can be traced backward through Romanesque and Byzantine buildings to Roman and Greek originals. One is tempted to see in the rules and geometrical studies that lay at the basis of these refinements a part of the secret of the medieval Guilds which all members were sworn not to divulge or to teach the journeymen. They were never embodied in writing and were certainly transmitted orally by the master-builders and imparted to full guild members after initiation.

There is one chapter in the history of medieval architecture that has not yet been written; it is the treatment of the mathematical basis of the Gothic system. It will already have become evident that I am a partisan of the scientific point of view. I believe that Gothic architects had a canon of building proportions just as truly as Greek sculpture had the Polyclitan and then the Lysippan canon of human proportions. No more in the first case than in the second does the use of the canon kill inspiration or individuality.

There is nothing novel in the belief that the triangle was the basis of Gothic proportions; modern critics such as Heinzelmann, Viollet-le-Duc, Dehio and Lamperez have sought to prove it. It has been accepted by Choisy. Detailed demonstrations have been made on such buildings as the cathedrals of Milan, of Toledo, of Strassburg and many more. Until quite recently there had not been much in the

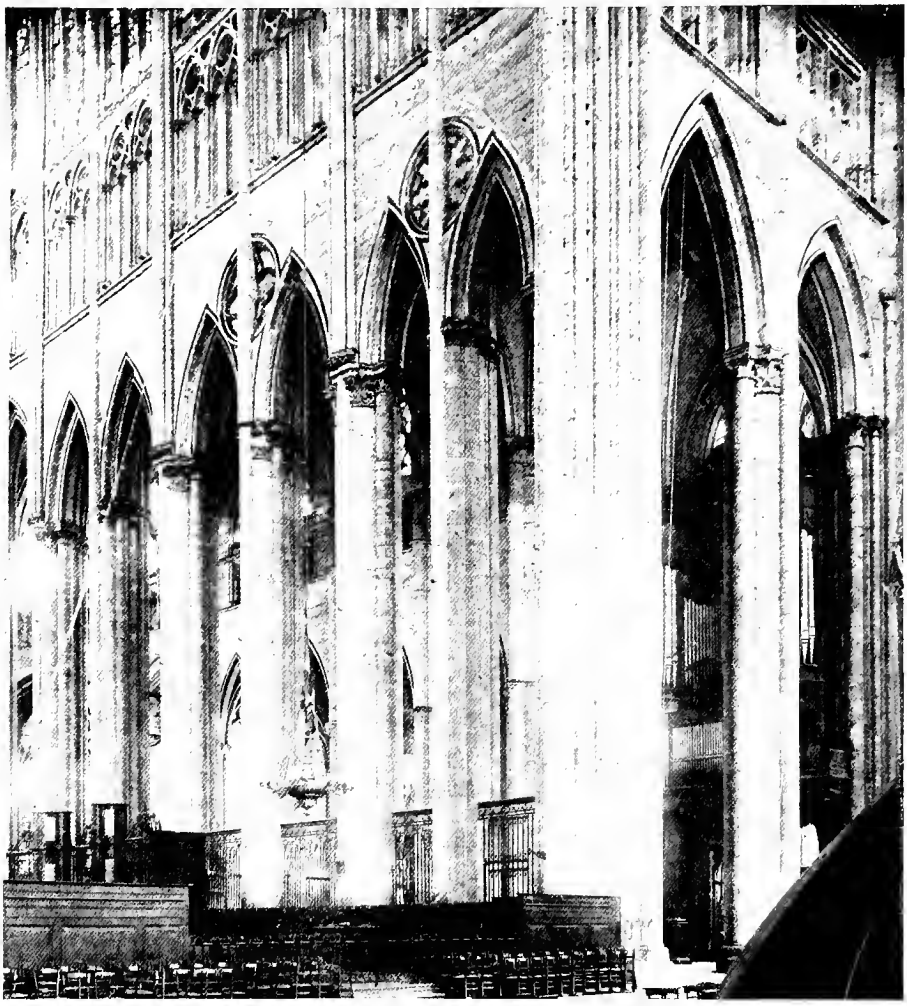
way of contemporary proof, except in the documents relating to the cathedral of Milan, which will be referred to elsewhere. But recently Lamperez has made known a treatise by a Spanish architect of the Renaissance whose *dicta* were based confessedly on those formulated by the last of the great Gothic architects of Spain, Gil de Hontanon. His formula for establishing the ground-plan of a five-aisled cathedral was tested by applying it to the Cathedral of Toledo, and it was found that Toledo's architect had followed the formula in every detail. The circle and square were used, as well as the triangle. The square lies at the basis of many façades, as Choisy demonstrates in connection with the original drawing for Reims Cathedral in Fig. 53. A person enamored of symbolism might see in the use of the square,—the material emblem,—in connection with the exterior of the church, and of the triangle,—the spiritual emblem,—in connection with the interior, a reflection of the well-known medieval idea, that the exterior of the church represented the world and its interior the New Jerusalem, the Church on earth. In any case, there can be no doubt that a triangulation, based on the equilateral, the isosceles inscribed in a square and the Egyptian triangles lay at the basis not only of the general proportions but of the interrelation of parts; and this I hope to prove in detail elsewhere.



70—Section of choir of cathedral of Beauvais. (From Viollet-le-Duc.)

The choir of Beauvais cathedral is an object lesson of the greatest historic interest. It is both a failure and a very beautiful work. Amiens cathedral seems to us the ultimate perfection of its style. The architect of Beauvais believed he could go a step further. The building commenced in 1247 and was completed in 1272: it belongs, then, to the generation that succeeded the designer of Amiens, though in its actual construction it preceded the Amiens choir. The emphasis

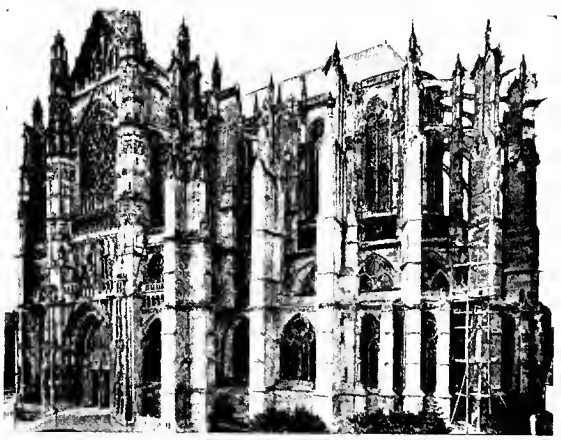
of vertical lines, which first appears evident at Amiens, is carried much further. The height of the main vaults was increased from 42 to nearly 50 metres. The wall-screen is thinner and the tracery and openings obliterated even more completely any flat surfaces.



71—Beauvais cathedral: view at transept. (From photo.)

This can be seen by comparing the triforium arcades of the two structures. In Figs. 70 and 71 the elongation is evident in every part, especially in the aisles, the clearstory and, of course, the buttresses. If we can obliterate the changes due to reconstruction it is easy to agree with Choisy that the choir of Beauvais was clearly con-

ceived, harmoniously proportioned, with soaring lines of unparalleled beauty, and was the most ideal work of French architecture. And yet, its architect went beyond what was safe in reliance on his knowledge of the science of equilibrium and the resistance of materials. The great vaults soon cracked and gave way, in 1272. In reconstructing them in 1288 no one had the audacity to follow the original plan. The distance between the vaulting ribs was considered too great at that height. Intermediate ground-piers were added; two narrow arches were built under each of the original arcades, and the oblong quadripartite vaults became sexpartite. These changes can be studied quite well in the view of the exterior of the choir in Fig. 72.



72—Beauvais cathedral: exterior at choir. (From photo.)

A study of the details of the original construction makes it quite clear that its instability was not due to any carelessness or lack of scientific knowledge on the part of the architect. It was necessary for someone to experiment in order to determine the limit of safety. This architect cast himself into the breach for the sake of his art. He took every possible precaution. This is illustrated especially in two things: in the form of the piers and of the buttresses. The core of the pier is not circular, as was customary, but oval, the elongation being toward nave and aisles, in order to allow a deeper imbedding of the vaulting shafts and the consequent stiffening of the support. Then, in the buttresses, we see that the mass as it ascends is subdivided and that the inner wall is projected over the aisle vaulting toward the building in order to offer greater resistance. It had been found that only two portions of the solid buttress piers such as were used fifty years before at Chartres, had any real value; the innermost section, which took care of the downward pressure after the fashion of a pier, and the outer section which counteracted the diagonal pressure. Acting on this knowledge the architects of the preceding generation had timidly opened galleries and passage ways in the lower part of the but-

tresses. But here at Beauvais, beside doing this, the architect broke the mass above the chapel-roof into two independent piers which were connected at the top by a double flying buttress.

Having reached the climax of masterpieces, it will be interesting to summarize the results achieved in the development of plan, construction, elevation; to give a glimpse of the various schools that arose throughout France, and of the decorative and figured sculpture, tracery and stained glass. Finally, a discussion of the men who created the new art will prepare the way for following its journey around Europe.

In plan the changes affect mainly the transept, the number of aisles, and the use of chapels. From the beginning the choir was strongly developed. The transformation took place under the influence of perfectly clear and practical requirements. The Romanesque plan had been dictated by the monastic orders and it had been necessary to have transepts as well as choir to accommodate the monks and lay brothers, who often numbered from three to six hundred. The public were not the first consideration. The Gothic plan was arranged by the secular clergy and the bishops primarily for the convenience of the people; it was the cathedral plan, in which the main consideration was to make it easy for the masses to see and hear the religious services. Therefore the transepts were very soon shortened or eliminated; the number of the aisles even in the largest churches reduced from five to three, as the multiplication of supports interfered with sight and hearing. Hall churches of a single nave or two equal aisles became frequent. After a time the interest of the wealthy was stimulated by the addition of chapels to the aisles, often connected with special families and their patron saints. The raising of the aisle vaulting and the diminution in the bulk of the piers can be attributed partly to the desire for giving the interior as much of a hall-like form as was compatible with symmetry.

The changes in plan are evident by comparing that of Laon at the beginning, with a transept that extends three bays (including inner porch) beyond the nave, with Notre Dame, where it does not project beyond the chapels. But Soissons, a few years later than Notre Dame, still has a projecting transept, though less prominent than Laon. At Notre Dame there are five aisles. Architects seemed to hesitate for a time whether to adopt the three or five-aisled arrangement. It became quite popular to compromise by having the nave with three aisles only, for the convenience of the people, and the choir with five aisles. The balance was often restored in such cases by the addition of

aisle chapels between the buttresses. These became popular after c. 1250. The transept was moved down almost to the centre of the church. In the typical plans of Chartres, Reims and Amiens the choirs all have five aisles and the naves only three, while the aisle chapels appear only at Amiens and Notre Dame. At Chartres and Amiens the transept projects one bay beyond the choir; at Reims hardly at all. The idea of an unbroken choir outline, such as we see at Notre Dame and Bourges, was discarded in favour of the projecting chapels either touching or separated by a wall line—straight or curved. Of course this was the more picturesque solution. The type with adjacent chapels prevailed, and its perfect form was given at Amiens and Beauvais, which the rest of France and N. Europe copied. In them were solved the difficulties of adjusting the vaulting of the irregular compartments of the ambulatory and the central vault. At the West end, the problem was how to treat the base of the two great towers which were an integral part of the façade. At Chartres we have seen that the inheritance from the twelfth century involved a separation from the body. At Noyon and Soissons there was a gradual approach to making of the base of the towers a bay of the interior: the process was almost completed at Notre Dame, where the piers supporting the two inner angles of the towers are merely heavier than those at the transept. The final solution appears in two forms, at Reims and Amiens. At Reims, the Notre Dame plan is perfected; but at Amiens, by making the towers shallow instead of square and by increasing the projection of the façade, the towers are supported by the triple porch.

Of course, we are now discussing what might be termed the orthodox plan. Every provincial school, as well as organizations such as the Cistercian order, favored certain peculiarities of plan. This particularly affected the choir and façade. The Cistercian order favored square-ending choirs: the South favored hall churches. There were frequent cases of single towers in the centre of the west front, etc.

The changes in elevation tended toward a gradual reduction of the main horizontal elements from three to two, by the reduction and then elimination, first of the super-aisle and then the reduction of the triforium and its final absorption into the clearstory design. The movement was toward a logical unity, that had a dangerous element of uniformity; toward a full but chaste decorative use of every constructive element, while reducing these elements to their simplest expression and smallest bulk.

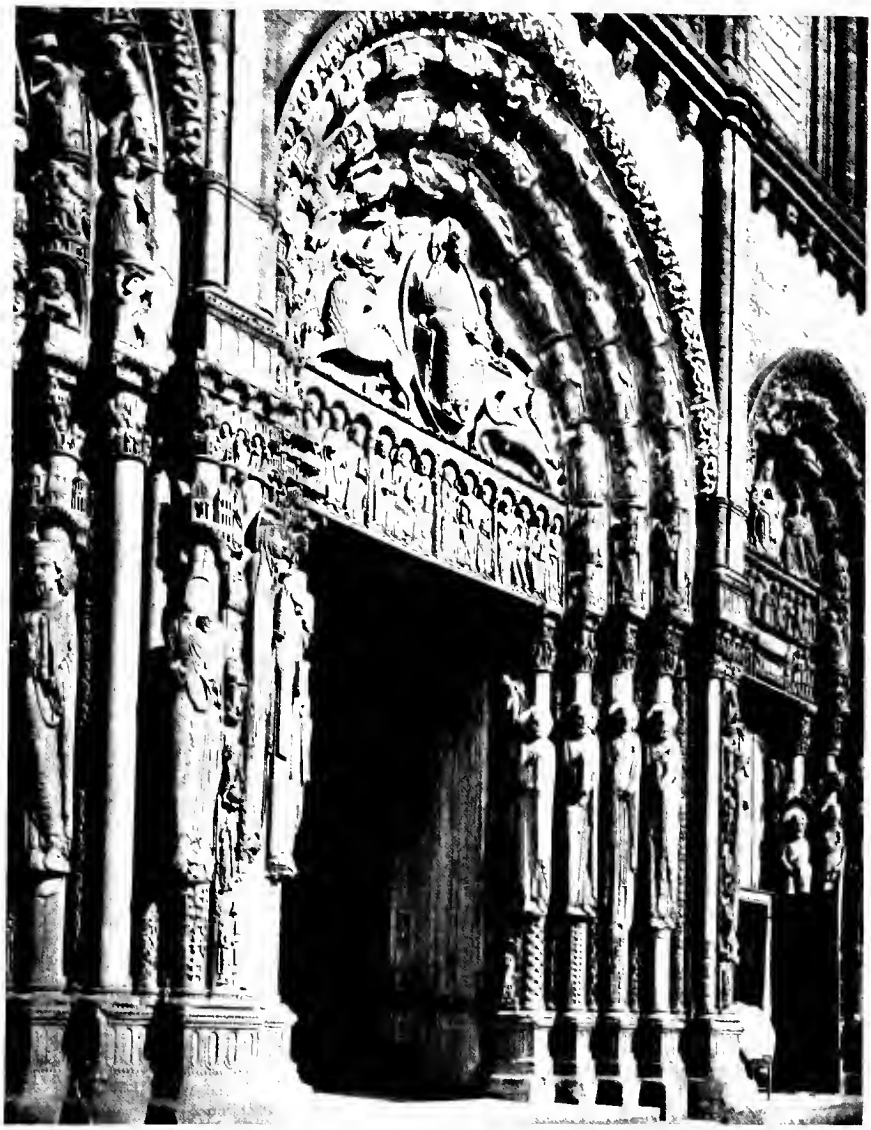
CHAPTER III

EARLY GOTHIC FIGURED SCULPTURE AND STAINED GLASS IN FRANCE

THERE has never been a period when figured sculpture was as architectural and as abundant. With the Greeks it hardly ever entered into the fibre of the building, but was a more or less harmonious adjunct. One feels with regard to the pedimental figures of Greek temples that they are rather an intrusion, more or less awkward. Roman art was more successful, especially in such creations as the triumphal arches with their historic reliefs, but never attempted anything on a grand scale, the decorative emphasis being laid on color.

Gothic sculpture had less independence, and for that reason its beauties have been generally overlooked, merged as they are in the general effect. If this were the place it would be easy to be eloquent as to the dignity and grace, the piquancy, verve and humour, the happy faculty of seizing salient and characteristic traits, the variety of pose, the broad understanding of draped effects, the harmonious merging of ornament and figure and, last but not least, the study of the nude under extraordinary difficulties due to the sentiment of the age. But most of these qualities concern us here only indirectly, as contributing to the sense of life, power and harmony that they convey.

What is more pertinent in architectural study is to analyse the basis of this close union of the two arts, in design and significance, so that we cannot only understand its principles but apply them to-day. In the matter of design the earliest works give the keynote, because from the very fact that they are stiff and over-elongated, they show the evident intention of the designer to use figures as a part of the architectural lines. The statues in the portals of the façades of St. Denis, Le Mans, Chartres (West Front) and Corbeil, which are contemporary (1140–1165) with the earliest transitional forms of architecture, are



73—Early west portals of cathedral of Chartres. (From photo.)

even more strictly the forerunners of the riper works of the Golden Age than was the case with the contemporary forms of architecture. In both spheres the changes were made largely under the impulse of a growing sense of beauty.

Before tracing this development, a word must be said of the subject-matter of these sculptures; only a word, because this is not a treatise

on Christian Iconography. In the Romanesque period when sculpture was used, it was more or less at haphazard in so far as the placing and grouping of the scenes was concerned. But the Gothic age was the age of encyclopedic learning, of systematic and analytic thinking. A recent writer, Mâle, has taken a volume to show how the works of figured art of this age expressed its learning and its beliefs. The typical encyclopedia of the day, the *Speculum* of Vincent of Beauvais, is based on a system of universal knowledge which corresponds almost exactly with the arrangement of the thousands of figures carved on the exteriors of French cathedrals. The scenes are grouped under these heads: exposition of Christian Faith; moral philosophy, with exposition of

74—Lintel of west portal, cathedral of Senlis. (From photo.)

both the good and evil in humanity; natural philosophy, or the world and man; his labours and occupations, physical and intellectual; the history of the world. A glance at the four ponderous folios of Vincent of Beauvais would not only correct the common delusion of medieval ignorance, but would give a high idea of the current knowledge of Oriental, Greek and Roman antiquity, and of the broad and keen insight which is also so evident in the sculptures. It will be enough to say here that with this encyclopedia in hand, it will be perfectly clear that the reliefs and figures on a French cathedral are so carefully placed that the slightest change would make nonsense of them. This is said to destroy the common delusion that these works are merely decorative and fantastic. They were carefully planned by consultation between the artists and the leading learned men of France.

Now, as to the artistic character and development. The triple por-

tal of the west front of Chartres, already mentioned on p. 44, is the masterpiece of its age. We have given in Vol. II, p. 355, a richly carved triple portal at St. Gilles, in Southern Romanesque style, but while highly decorative, this and the similar work at St. Trophime, Arles, cannot compare in quality, nor do they stand in the line of development toward Gothic work. Fig. 73 is particularly happy in its perspective view of these portals of Chartres where the figured work is so adapted to the architectural lines as to make it a model for the later artists. How it was almost at once imitated in Spain, at Avila, is shown in Vol. II, p. 425. Other works in Central France show how prevalent was the manner of the Chartres school. At Le Mans the way in which the figures are merged with the columns in front of which they stand makes them even more like caryatid architectural members. The king and queen from Corbeil are careful portraits of exquisite workmanship and illustrate the fact that the figures of kings which in the thirteenth century were given a separate gallery on the upper part of the façade, were then placed in the portals.

75—Statues in west portal, cathedral of Senlis. (From photo.)

The next step is illustrated at the Cathedral of Senlis, shortly before 1200. Here we find a most interesting and new vivaciousness in the lintel reliefs (Fig. 74) which remind one of the over-vitality of Greek athletic figures at the close of the archaic age. In both cases it was the natural reaction of men who were freed from a long technical inability to express action and feeling. This makes it all the more significant

that the statues in the same portal, below this lintel (Fig. 75), preserve their straight architectural lines.

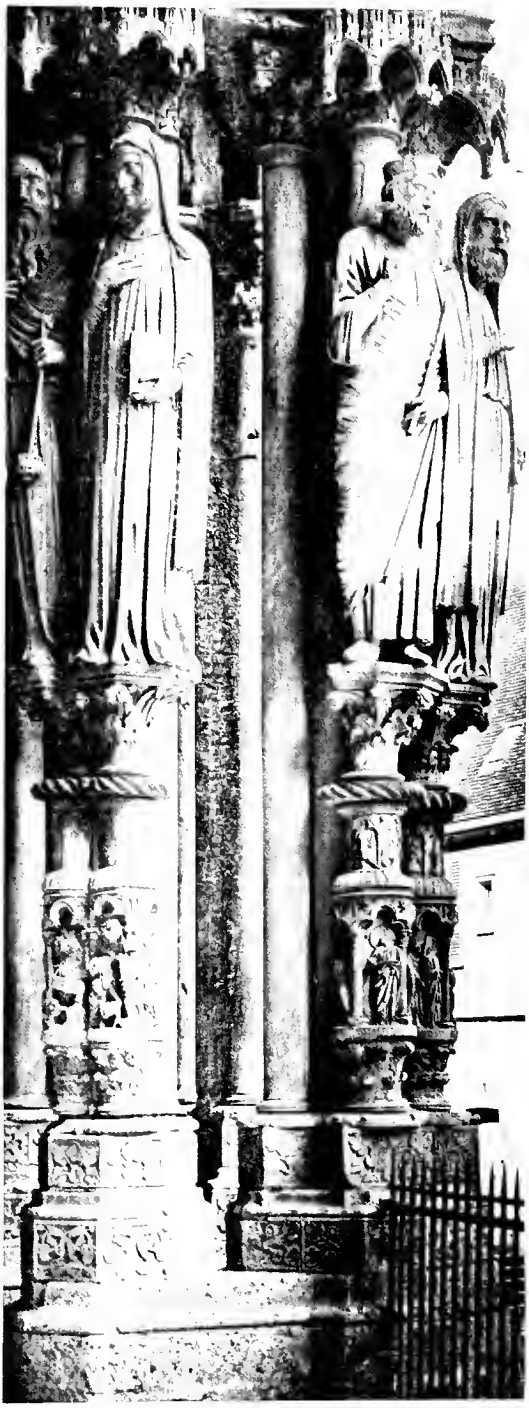
Of the sculptures at Chartres cathedral the early west portals have already been mentioned. Their position on the west front can be seen in Fig. 49. The rest illustrate two stages, one before Notre Dame and one contemporary with Reims. The Christ and statues of Patriarchs and Fathers in the portals of the transepts together with the tympanum and archivolt reliefs are rigid and (in the smaller

76—North portals, cathedral of Chartres. (From photo.)

figures) heavy, without the beauty so soon to be shown at Notre Dame. They illustrate the stage after Senlis. Their date is 1200–1210. But the projecting porches that were added to these portals toward 1240 are in the fully developed style, often more graceful than the contemporary works at Reims. Nothing could more beautifully express the chivalry of medieval knighthood than the statue of St. Theodore, which has the simplicity characteristic of all truly great art. A general view of the triple porch of the north transept is given in Fig. 76 and a detail in Fig. 77 illustrates what progress had been made since Senlis in giving individual values.

A further advance, between 1210 and 1225, is shown in the west front of Notre Dame. The dignified statue of the Virgin in the centre heads the interesting group of caryatid-like statues that stand under the centre of the lintels of cathedral portals. The Coronation of the Virgin and the rest of the scene in the tympanum of the left-hand portal is also a most harmonious triumph of high-relief sculpture: it is a simple and rhythmic art, in which the consciousness of life and power has entered somewhat timidly. Very soon, between 1225 and 1235, greater exuberance and variety appears in the statues and relief of the Amiens façade; but finest of all the figures, the "Beau Dieu" or figure of Christ against the lintel, has retained all the majesty of Notre Dame with an added intensity. The artist gives rein to his new desire for the picturesque only in the statues that surround the central figure.

It is Reims which will furnish the most wonderful and varied decorative work in sculpture. It has been



77—Statues in north porch, cathedral of Chartres. (From photo.)

78—Statues in left portal of west façade of Reims cathedral. (From photo.)

70—Head of St. Joseph from statue in central west portal, Reims cathedral. (From Michel.)

called the "Parthenon of Gothic Art." The versatility of its school is amazing. The portals on the west front are the earliest in date. In the gables that surmount them are groups added during the fourteenth century (Fig. 236). The general arrangement appears in Fig. 54, taken before restoration. The style of the single statues and their relation to the architectural frame is given in Fig. 78, where the six statues show an extraordinary mastery of drapery which equals the antique and shows even greater variety of treatment. The poses show figure study from models. The transepts and flanks have also richly carved portals. Statues are scattered everywhere else under canopies, and corbels rest upon heads of masterly (Fig. 80) character.

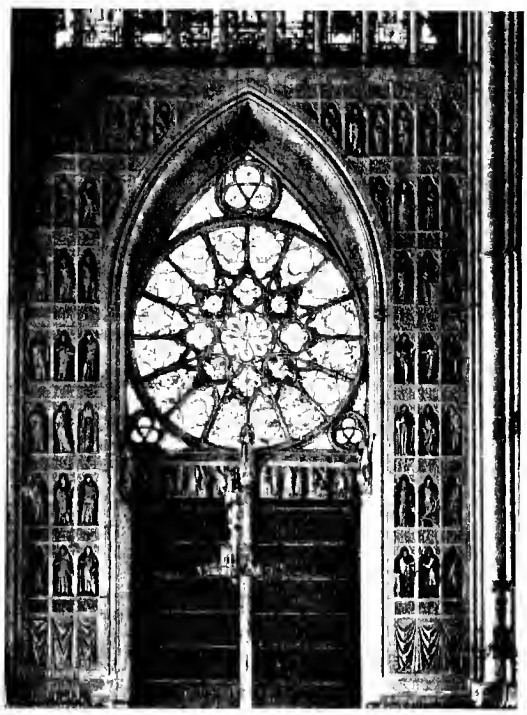
80—Corbel head, cathedral of Reims. (From photo.)

The expressiveness of the St. Joseph of Fig. 79 is inimitably quizzical. In fact one can say definitely that these sculptors were realists of the extremest type whether in reproducing beauty or deformity, that they were also idealists in creating types of both these opposite kinds, that they were careful students of the nude. Witness not only the way in which the body is given through the draperies, but especially the wonderful rollicking tympanum reliefs in Fig. 81 from the right-hand buttress of the façade, where the nude is treated with so much abandon and mastery. Finally there is an evident knowledge of the antique and an adaptation of its best types of drapery and form. It would be quite beyond our purpose to follow the further development of sculpture; there were no novel ways imagined after this date in France. Sculpture, to be sure, became more and more used in civil structures; palaces, chateaux, town-halls, etc. This was because the increased luxury showed itself in the phenomenal increase of art applied to private purposes. The type for this was set in the decorations of the old Louvre in the reign of Charles V.

81—Relief at right end of façade of Reims cathedral. (From photo.)

It was very seldom that the rich carving of the exterior overflowed into the interior. We cannot be too thankful for this restraint and regret the few exceptions, such as the placing of statues on brackets or otherwise against the supports of the nave, a vicious practice occasionally occurring in Germany (Cologne, S. Lawrence at Nuremberg, Freiburg), and even in Italy (Milan cathedral).

There is, however, one beautiful instance at Reims of internal surface carving, characteristic of the luxuriance of this great building. This is the carving of the central section of the west façade, below the rose window. It appears like a sculptured reproduction of a tapestry, with single figures under trilobated arcades and a surface ornamentation that is extraordinarily exquisite even for the best Gothic period. Its studied simplicity and repose make it a very successful bit of decorative work (Fig. 82).



82—Inner wall of west front, cathedral of Reims. (From photo.)

One form of sculptured ornament was introduced toward the middle of the thirteenth century which, while it was not an integral part of the structure, strongly affected it. I mean the choir screens, wood screens and *jubés* by which the choir was separated from the rest of the church. They were solid high structures, highly decorative and lavishly carved, introduced through a change in liturgical usage to segregate the clergy from the congregation. They broke up the unity of the interiors, destroying the sweep of lines in the lower part of the church. Most of those in France have been destroyed; some of them at the Revolution. That of Notre Dame remains in part and we know the sculptors who carved it during the thirteenth and fourteenth centuries. In Fig. 83 one gets some idea of the polychromy of Gothic figures, which has been somewhat preserved in these interior sculptures. The entire design was approximately as Viollet-le-Duc has restored it in Fig. 84. Later screens of extremely elaborate character exist at Brou, Albi, Amiens and Chartres. They are still numerous in Spain, Belgium and England.

In a few cases free-standing statuary was used; the most striking illustration is the Sainte Chapelle in Paris, where the twelve apostles are arranged at equal distances on both sides in two rows. Here also there was enough color remaining to allow Viollet-le-Duc to restore a brilliant polychromy.

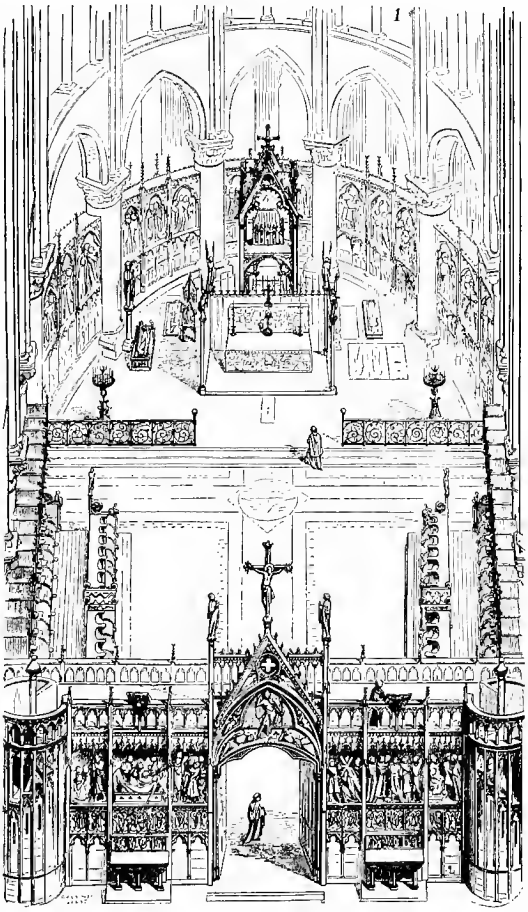
Color Decoration. As affecting Gothic interiors three forms of color decoration must be reckoned with; polychromy, stained glass, wall-painting and, to a very slight extent, mosaic painting. In itself the art of mosaic work is the ideal method of adding the element of

83—Choir screen (reredos) at Notre Dame, Paris. (From photo.)

color to a wall surface and we have seen how skilfully this was done in Early Christian and Byzantine art, as well as in Italy as late as the close of the Romanesque period. But in Gothic buildings of pure type it had no place, owing to the suppression of wall space, and it survived during this period only where Gothic principles were not followed, mainly in Italy. Its most interesting examples are, perhaps, the apses of some Roman churches, such as St. John Lateran, S. Maria Maggiore and S. Maria in Trastevere. In exterior work its happiest use is in the façade of the cathedral of Orvieto, where it is combined with a rich sculptured decoration. The gables are filled with figured compositions. This façade also illustrates the decorative value of mosaic inlay in set patterns in the twisted and other forms of columns and colonnettes,

which fill the portals (see Figs. 313 and 315). They also form the decorative keynote of the beautiful cloisters of Rome (Lateran, S. Paul, Sassovivo, etc.) and its vicinity. All this, however, is a side issue, pertinent only to Italy.

Mural painting as an adjunct to Gothic architecture was of real importance only in Italy and in a small part of Germany. This was a foregone conclusion as soon as the suppression of interior wall space became a general fact. It is an interesting hypothesis that had the Italians been as thorough converts to Gothic skeleton construction as the rest of Europe, the grand style of fresco painting would have died, and not only would we have had no Giotto but no Sistine Chapel or Stanze, no masterpieces by Pinturicchio, Michelangelo, Raphael, Correggio or Paolo Veronese.



84—Restored choir of Notre Dame, Paris.
(From Viollet-le-Duc.)

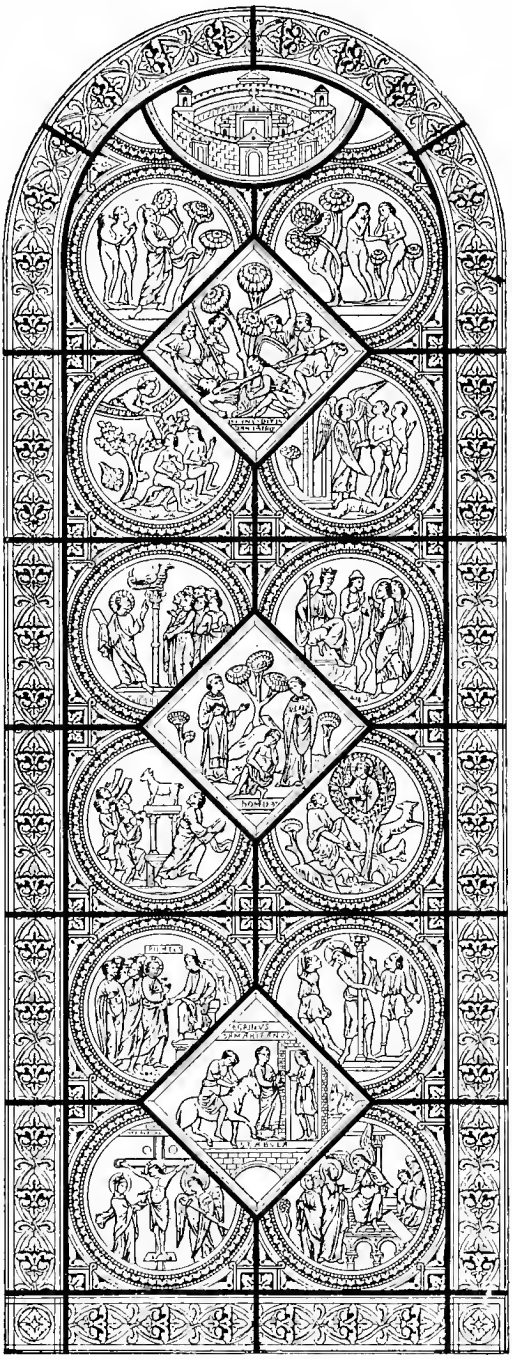
In France it has been noticed that the sparse examples of mural painting show that its technique was transformed under the influence of the new art of stained glass. This was shown mainly in two ways: in construction by the adoption of small compositions, especially in the form of medallions; in tone by the use of solid colors laid on in masses without much shading. This was not at all the case in Italy, where the tonality was kept subdued and varied and an increasing realism was given to both figures and setting. Such decorative ensembles as we find at Assisi, Subiaco, Sta. Maria Novella in Florence, Sta. Anastasia

at Verona, the Eremitani at Padua and the Sancta Sanctorum Chapel in Rome are eminently a part of architectural design. A view of St. Francis of Assisi in Fig. 307 will show how the lines of the diagonal longitudinal and wall ribs are not only followed by the painter but are emphasized by parallel decorative lines framing the scenes. Every other architectural feature is utilized as a framework and no space is without its pictorial covering in a style that harmonizes with the architecture of the building; in the compositions themselves buildings and architectural details played an important part. This emphasis on the decorative side of mural painting was very strong up to about 1350. It then passed through a similar evolution toward independence that, both figured and decorative, we have noticed in France in the case of stained glass and sculpture.

What was quite revolutionary in the field of color and universal in its bearing on Gothic style, was the development—one might almost say the creation—of the art of stained glass. It is sometimes thought of carelessly or ignorantly as painting on glass, but what can be properly called by this name is a later and regrettable deviation from true medieval methods. This method consisted in forming a composition by the grouping together, by means of a leaden framework, of a mosaic of small pieces of glass colored in the mass and to which enamel colors were at times added and fused with the colored glass. This explains the depth of color in medieval work and an effect corresponding to mosaic painting.

An occasional window is met with in Romanesque buildings of the twelfth century, but only in its later half, with the increasing size of the openings, was there any sign of the new art. It seems as if the abbey church of St. Denis, where so many artists gathered from everywhere, was the source of the movement in this as well as in architecture. A few works can still be seen at Le Mans, Chartres, Angers, etc., of this pre-Gothic style, which was but little changed when work was commenced toward 1210, on the great undertaking of filling the windows of the cathedral of Chartres, the first (except Notre Dame) to furnish a characteristic Gothic clearstory with windows occupying all the wall space. In the course of the work great progress was made and the new art was definitely established. The windows are filled mainly with an aggregation of small medallions and lozenges or arcades, set in a tapestry-like framework and decorative ground and filled with minute figures, the whole being encircled by a wide band of interlaced linear

and floral patterns. Chartres, then, marks the definite exodus of mural painting in France, and, as the most recent of art historians believes, the masters formed in her *chantier* developed and introduced the new art not only throughout France but into England and, perhaps, Germany. This judgment was foreshadowed in the admirable words of John Lafarge in the Dictionary (III, 1071), which need quoting here: "In the older "stained glass, such for ex- "ample as the glorious west "windows of Chartres, all "the principles of work in "glass are stated, though in "an archaic form. A clear "understanding or appre- "hension of the difficulties "of color radiation and its "effects from one color upon "another, the opposing or "harmonizing effect of the "use of complementary col- "ors and design, arising from "an adjustment of these dif- "ficulties—these points can "be seen stated there as in "a grammar." The effect of distance on these phenomena and in changing the proportions and shadings of the figures is here carefully discounted; and the super-



85—Early stained glass window at cathedral of Sens. (From Michel.)

position of colors by plating is already thoroughly understood. The effect of the heavy tones of the leads on the design, which might easily be detrimental, is turned to the best advantage. Finally, the window is so connected with the wall by design and color as to seem a part of it, and the small scale of the figures is calculated to add to the apparent size of the interior. A typical design is given in Fig. 85: to give it in color would be to traduce it. It is a window at Sens. It is practically impossible, however, to appreciate this sort of work except on the spot.

On entering the thirteenth century the dominant color note of the ground, which had been blue, tends to a deep red, and this prepares the way for the later violet. As found to be the case in figured sculpture, this earliest Gothic stained glass is more strictly a part of the architectural design than was the case with the more developed and freer art. Modern architects in planning church interiors would do well to reintroduce this type of work both as to coloring and scale. It is the most perfect that could be imagined, from their point of view, even though a painter might criticize the drawing and lack of naturalism.

Other fine series of windows by the artists of this school still exist at Bourges and Le Mans, and a few at Sens, Laon, Tours, Rouen and Lyons. Some of these French *verriers* went to England, probably at the same time as the French master-masons, and we see their works at Canterbury and Lincoln: unless we imagine that these windows were executed in France and shipped to England.

In the middle of the thirteenth century the School of Paris gained the ascendancy and introduced some radical changes: witness the two enormous rose-windows at Notre Dame and the series of the Sainte Chapelle, to be followed by numerous works in the cathedrals of Tours, Clermont-Ferrand, the upper choir of Le Mans and many more. In these and later works there is a distinct loss of decorative value and harmony. The wide borders become thin and insignificant, the element of ornamentation dwindles before the dominance of the figured compositions. The figures themselves constantly increase in size. There is a distinct change of scale. The coloring becomes livelier and more transparent, with a large infusion of violet. In line with this comes the use of thin *grisaille*, a greenish white glass, either mixed with the heavily colored glass or used by itself. This later style is illustrated in Fig. 86. The entire tendency is to make of the window less a translucent wall-space than a picture in an opening.

We are disappointed in the little that remains of the windows at

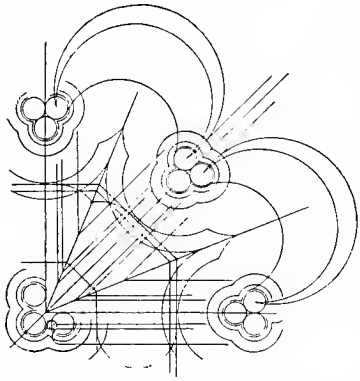
Amiens and Beauvais, as they show the early stages of this mistaken artistic evolution. At Auxerre and Troyes (St. Urbain) are some charming combinations of deep-colored glass with *grisaille*, which is often used as a frame and background. Of course, there was constant progress in the artistic treatment of figure and composition, but for the architect this does not compensate for the broader losses. One of these losses is connected with changes in technique. Glass-makers had learned to manufacture glass in much larger pieces, so that the compositions lost their mosaic-like aspect and there was a great diminution in the use of leads, which were largely replaced by iron bars. A new process by which it became possible to paint a glass surface with ochre and chloride of silver, led to the wide use of yellow: this and the increase of white glass combined with the *grisaille* to kill during the fourteenth century what was left of the old harmony. The windows in the choir of the cathedral at Evreux are typical of this later phase.

80—Stained glass window in church of Kuppel. (From Michel.)

It would be out of place to trace here the story of the art in the other parts of Europe to which it was introduced from France. It is in Germany that it can be studied in the greatest profusion; and it is Italy which was the least productive.

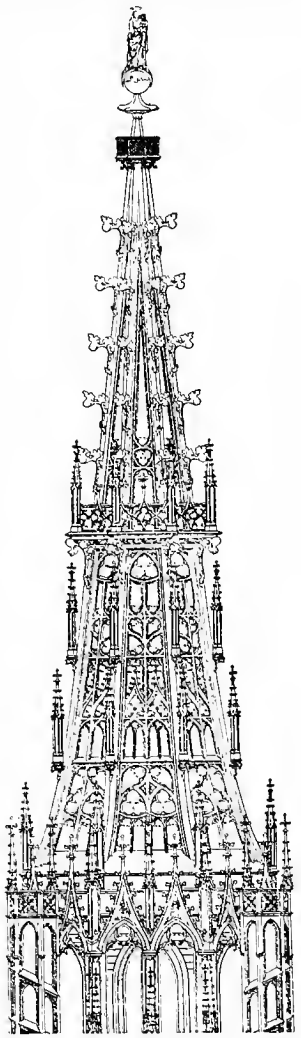
Architects. As long as architects were almost exclusively monks, their personality and power were not conspicuous. All was for the glory of the monastery, not of the individual: and the work was largely a corporate effort. But when, in the transitional period, toward 1150 or 1160 the lay architects began to acquire first the ascendancy and

then the monopoly with powerful lay guilds at their back, then we begin to have numerous records of prominent and influential architects. We can connect both Reims and Amiens with the names of their architects. Robert de Coucy conceived the plan of Reims in 1211 or 1212; he was followed as head architect successively by Jean Leloup, author of the portals of the main façade, by Gaucher of Reims, Bernard of Soissons and Jean d'Orbais. The man who gave the plan for Amiens and began its construction was Robert de Luzarches, who was succeeded first by Thomas and then by Regnault de Cormont. There is proof that the employment of a head architect for a new or remodelled cathedral was after free competition with other candidates for the work. The album of sketches left us by one of their contemporaries, the architect Villard de Honnecourt, gives us some idea of the freehand hasty sketches made in the course of travel and study. The one here given (Fig. 87*a*) is one of several details of Reims. Every day documents are coming to light giving the names of the men who created the churches of the thirteenth and fourteenth centuries. Models and drawings were commonly made before work was begun and submitted for approval to building committees. Modern notions as to the crudity or lack of such drawings are erroneous. Also it is a mistake to believe that detailed working drawings were not made as required. The cathedrals of Vienna, Strassburg, Cologne, Milan, etc., preserve many such drawings and the texts mention them as a necessary prerequisite. Later, in the chapter on German Gothic, the *projets* for the façade of Regensburg cathedral will be reproduced (Fig. 390). I have already given in Fig. 53 a *projet* for the façade of Reims cathedral, drawn in about 1212, together with a detail of the same period; and a specimen (Fig. 314) of Italian drawings of the same century, though later, c. 1290, is a charming *projet* for the façade of Orvieto cathedral. In Fig. 87*b* is an accurate detailed *projet* for the spire of Ulm cathedral. We know that the early drawings or models were often used during the course of several centuries by successive generations of artists when a church



87*a*—Original drawing of XIII century for detail, cathedral of Reims.

was long in course of construction or needed partial reconstruction. Of course, there are numerous cases where differences in style show that this rule was not followed. At times the general scheme may be preserved, but in the tracery, the form of the arcades, etc., it is evident that the working drawings were made at the time of execution. The power of the head architect, the *maître de l'œuvre*, was by no means despotic, though in the Twelfth century it was almost so, with progressive elimination of power. He was accountable to the Building Committee. On important occasions his work was scrutinized by a Commission of Architects whose recommendations he was obliged to follow or whose report might result in his dismissal. During the Fourteenth century his authority, such as it was, suffered gradual diminution, through increasing independence of the different subordinate arts and their unions. He submitted designs for the façade, or the vaulting or rose-windows, in competition with others and his need not be the ones adopted. He was at first constantly in charge of a single building and in daily attendance, himself working at the decorative and figured sculpture and supplying the necessary drawings. Gradually, he came to occupy a different position, ceased to work himself, except to give the preliminary sketches and instructions; took charge of a number of enterprises which he would visit occasionally and relied on a *chef-de-chantier* for working drawings. He was quite a personage at all times, the equal of the upper bourgeois; was honored by monuments and inscriptions and even by portraits.



87*b*—Project drawing made for tower of Ulm cathedral. (From Dehio.)

Opposite p. 122 is a reproduction of the exquisite model made for St. Maclou at Rouen before its construction by the architect in charge.

CHAPTER IV

LOCAL SCHOOLS AND LATER GOTHIC IN FRANCE

LOCAL French Schools. After this excursion into general Gothic characteristics we must return to a consideration of French works and glance at the local schools in France.

Normandy was not only important as furnishing, in all probability, a number of the constituent elements of primitive Gothic such as the sexpartite vault (which we find in the two abbey churches at Caen), and the triforium gallery; it continued to show great individuality throughout the Gothic age. The Cathedral of Lisieux illustrates, on a small scale, the same decades and a similar juxtaposition of successive styles (Fig. 88*a*) as Notre Dame, with its columnar nave of 1160–1188 and its choir of 1226–1235, where the triforium gallery is particularly symmetrical and quite advanced in its delicacy. As the vaults of the nave are quadripartite they probably are coeval with the choir. In the cathedral of Rouen, one can see in Fig. 88*b* that the choir (1202–1220) with its columns is earlier than the nave, and decidedly the most beautiful part of the building. The nave, which was built later in the century, has none of the excellencies of

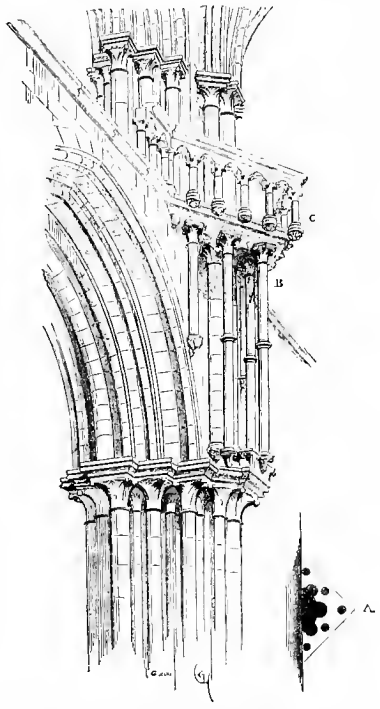
88*a*—St. Pierre, Lisieux. (From photo.)

contemporary work in the Ile-de-France, Champagne and Burgundy. It adopted the clustered pier of the St. Denis type, but gave it a Norman heaviness, and this heaviness and lack of symmetry pervades every part. At a time when the double-storied aisle had been elsewhere abandoned, the upper arcade appears here in colossal dimensions with a single arch; but it is unique in opening not on an independent gallery over the vaulting of the aisles but into the aisles themselves. Possibly, there was a change made in the course of construction and the aisle-vaults as planned were considered low (Fig. 69), so the cluster of shafts (Fig. 89*a*) was added in the aisles over the capitals of the piers and carried up to the gallery openings where the piers of the vaulting shafts rest. This raising of the level of the aisle-vaults was doubtless partly owing to the plan for adding the line of aisle-chapels. The entire building gives a feeling of heterogeneousness, and this is natural, because though begun soon after the fire of 1200 one of its richly carved portals (Portail de la Calende) was not added until after 1460, and after that the great tower called Tour de Beurre (1487–1507) and the decoration of the main façade (1508–27). This, and the impossibility of obtaining a good view of the whole exterior, rather obscures certain very interesting and beautiful features, especially the windows of the chapels inserted between the buttresses and the Portail aux Libraires—both charming thirteenth century works. It is important to note the peculiar arrangement of the great towers in relation to the façade. They do not stay within the plan of the church but project sharply beyond the aisles, forming a flanking mass of imposing effect. The scheme is peculiarly a Norman invention and spread to Spain and England, where we shall find twin towers pro-

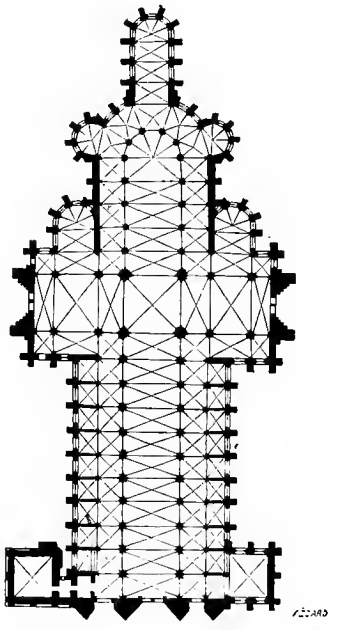
88*b*—Nave of cathedral of Rouen. (From photo.)

jecting in both directions from the west front—a sign of Norman influence. The choir plan is also unusual in its chapels (Fig. 89*b*).

Even when compared with the more famous cathedrals of the Ile-de-France, there is a building in Normandy which is, to my mind, one of the most splendid masterpieces in France. It is the cathedral of Coutances. It has the Norman strength with the Romanesque heaviness eliminated. The massive piers at the crossing and the tower-

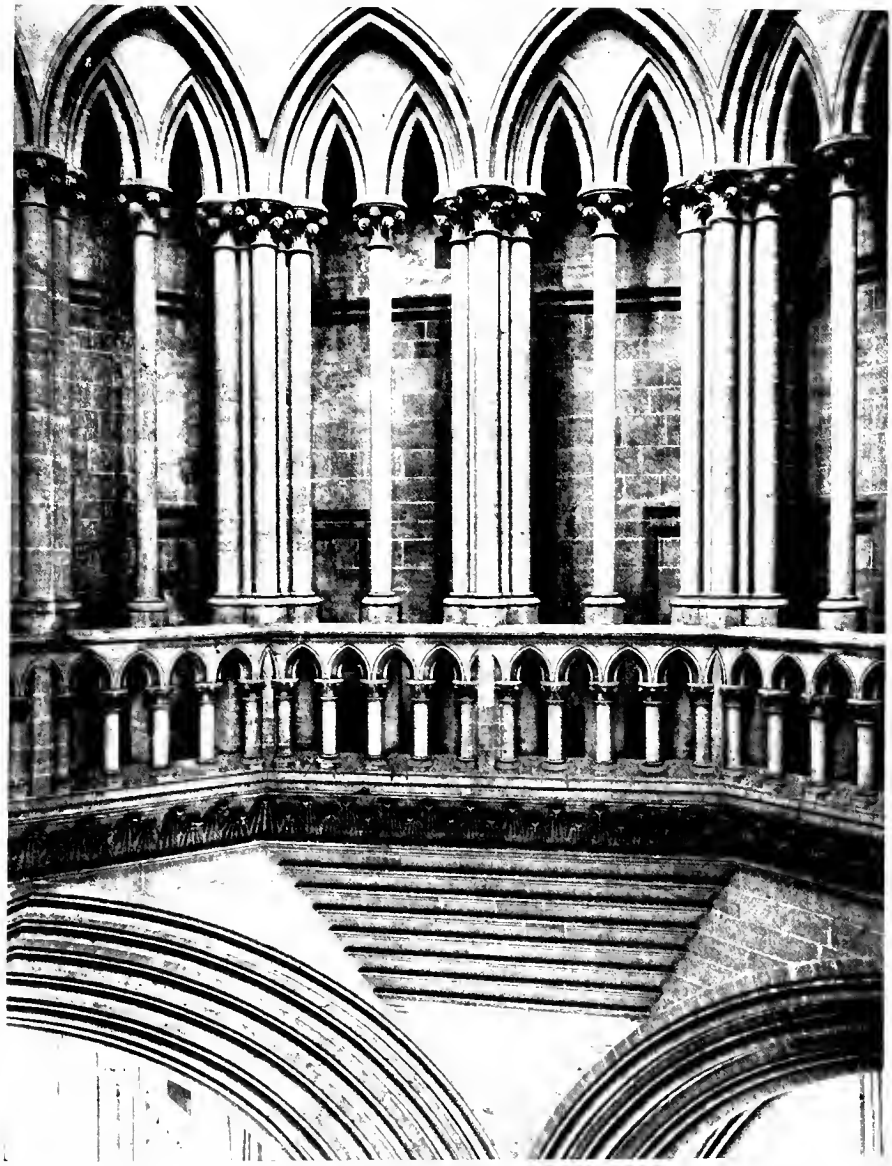


89*a*—Pier with gallery, cathedral of Rouen. (From Viollet-le-Duc.)



89*b*—Plan of cathedral of Rouen. (From Viollet-le-Duc.)

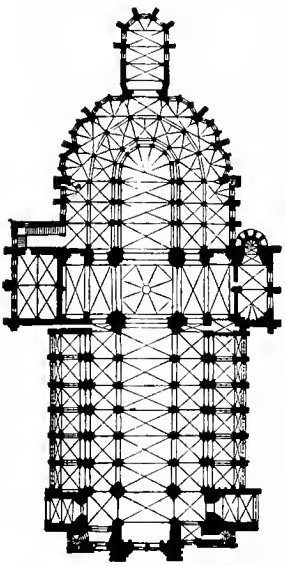
dome they sustain carry one for comparison to Spain and its *cimborios*. Every designer will find a treasure-house of felicitously proportioned details. In Fig. 90, which gives the base of the ribbed dome (58 m. high), there is a gallery which is admirable. By minute subdivisions the architect managed to reduce the apparent size of all heavy units, and to give splendid sweeps to his lines. In the choir aisles shown in Fig. 91 the columns of the preceding stage are retained: the rest is in the thirteenth century style, and an admirably rich example, with unusual coupled shafts. In the nave the horizontal lines are over-emphasized



90—Detail of base of lantern, over transept, cathedral of Coutances. (From photo.)

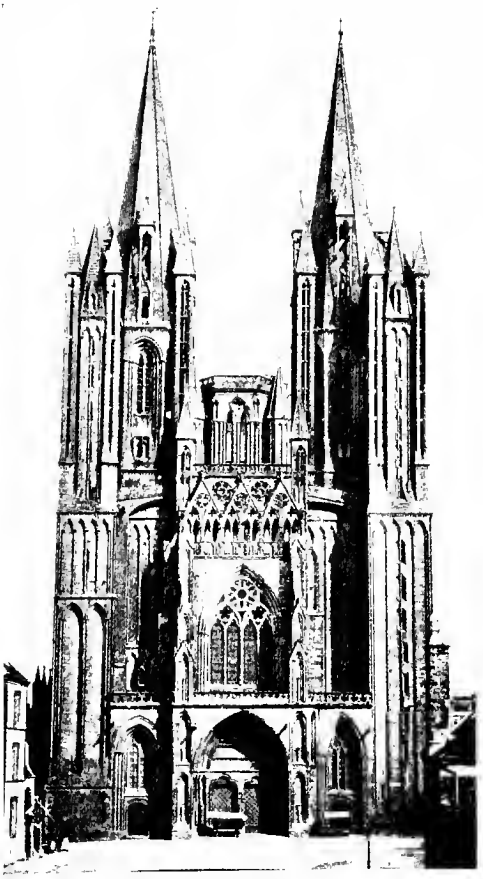
by the heavy balustrade of the triforium gallery and a second balustrade under the triforium. When the line of nave chapels was added toward 1270, great ingenuity was shown in eliminating the solid masonry of the walls and buttresses, as a glance at the plan in Fig. 92 will make quite clear.

91—Apsidal aisle of Coutances cathedral. (From photo.)



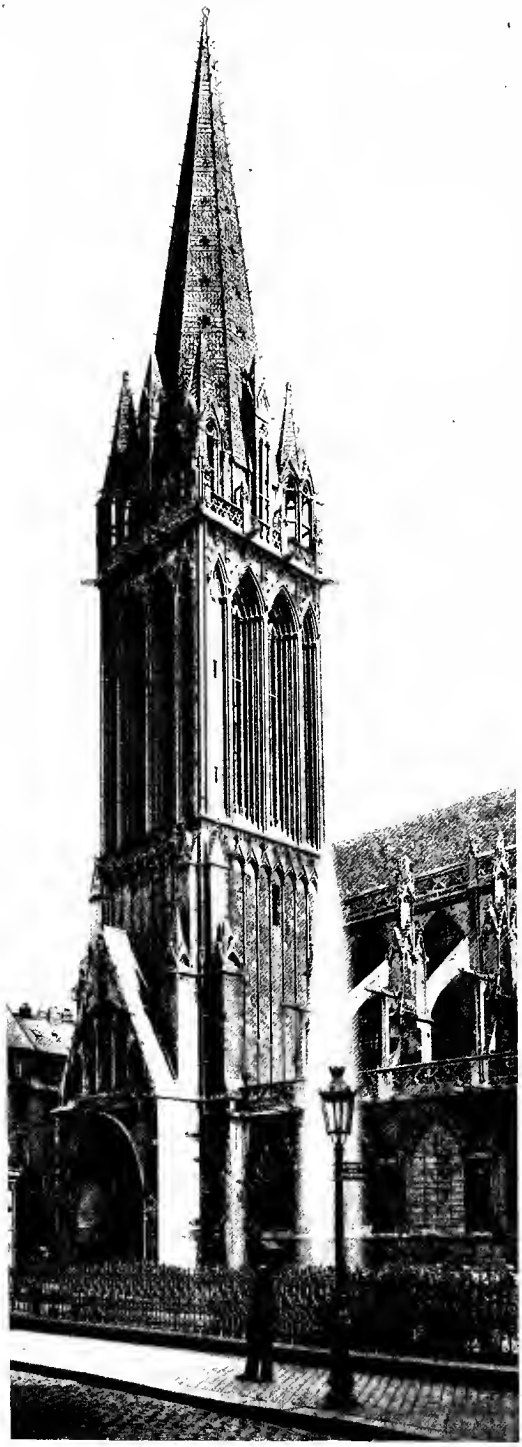
92—Plan of Coutances cathedral. (From Viollet-le-Duc.)

In the façade there is a distinct note of originality. On the ground of symmetry one may not approve of the semi-masking of the towers by the tower-like triple turrets that contain the staircases for these towers and also serve as buttress-piers. Still, we note the admirable way in which the two planes of the façade are managed by the union of these piers with the triple portal and by the projection of the central section. There is a glimpse of the central octagonal lantern, which has a single story of unusually high and slender two-light windows. An effect of extreme verticality—almost ascetic—is given by the entire upper part of the exterior. The towers are among the most beautiful of the early Gothic period. The view in Fig. 93 gives an idea of the value of the composition, but a great part of the charm comes from the splendid quality of the stonework.



93—West front of cathedral of Coutances. (From photo.)

There are many other masterpieces in Normandy in the thirteenth and fourteenth centuries: the choirs of St. Stephen at Caen and of Bayeux, the monastic buildings at Mont St. Michel; the cathedrals of Séez, Evreux and St. Ouen at Rouen. It is natural and interesting to note in many cases characteristics that we shall meet also in England: the slender lancets, single or in groups of two



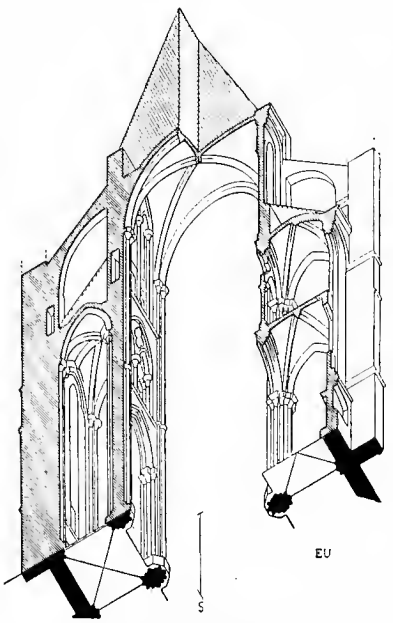
94—Tower of St. Pierre at Caen. (From Gurlitt.)

and three; the aversion to tracery; a tendency to retain the triforium; a heaviness of walls and supports. Some of these buildings will be described elsewhere. In the matter of decoration it is noticeable that there is very little figured sculpture, and this, combined with a rather puritanical absence of ornament and tracery, is one of the main differences from the school of the Ile-de-France. Only two more works will be here selected for illustration on account of their unusual quality: the great tower of St. Pierre at Caen (Fig. 94), where an effect of height is given by a single story of richly moulded immensely tall windows; and the church at Eu (Fig. 95), whose system, as shown in the left side of Choisy's cut, affords the only case resembling Rouen cathedral in having a gallery opening into the aisle.

The other main provincial schools are those of Burgundy, of the Southwest (Angevin) and the South. The differences in the first two schools are of

less radical importance than those of Normandy, so need not be discussed separately to any extent.

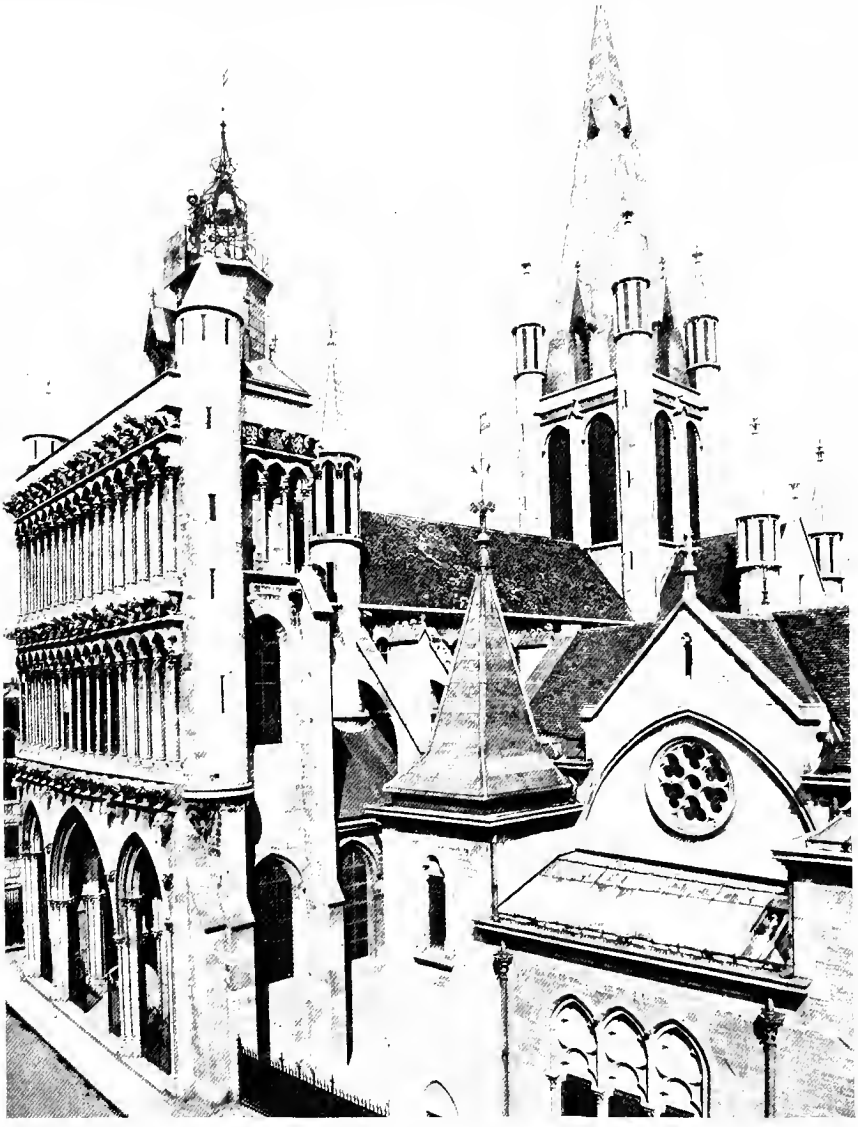
In Notre Dame at Dijon (Burgundy) the façade is unique in France, with its three-storied closed porch. The triple portal is a monastic type. It has been suggested by M. Enlart that this form of porch served as model for certain porches in Italy (Piperno Cathedral, S. Clemente di Casauria), but the reverse is more probable, especially as the two galleries of decorative arcades are evidently an Italian importation. At all events, the design at Dijon is thoroughly un-Gothic in its horizontality. It was to have had two flanking towers that were never built. As a specimen of a parish church this is the most interesting of its class among early Gothic buildings and is an admirable subject of study for an architect planning a church of moderate dimensions (Fig. 96).



95—System of cathedral of Eu. (From Choisy.)

The choir at Dijon (cf. choir of Vezelay) is a beautiful example of scientific simplicity, but for the Burgundian school the choir of the Abbey Church of Vezelay is of capital importance. It is one of the earliest with a ring of chapels and these are shallower than in the Ile-de-France and open widely into the ambulatory. Simplicity, solidity and scientific structure are the main Burgundian characteristics. This appears in the system of the apse at Dijon in Fig. 97 and especially clearly in the dissection of its masonry on the right. In connection with the outside service gallery for the clearstory, which can be seen here, it is interesting to compare the other type, rare in France, but common in England, of the *internal* service clearstory gallery in the church at Sens (Fig. 98). Normally a French architect did not care for so heavy an upper wall mass as this required. The effect here is charming. It led to such effects as in Fig. 99, a characteristic Burgundian grouping.

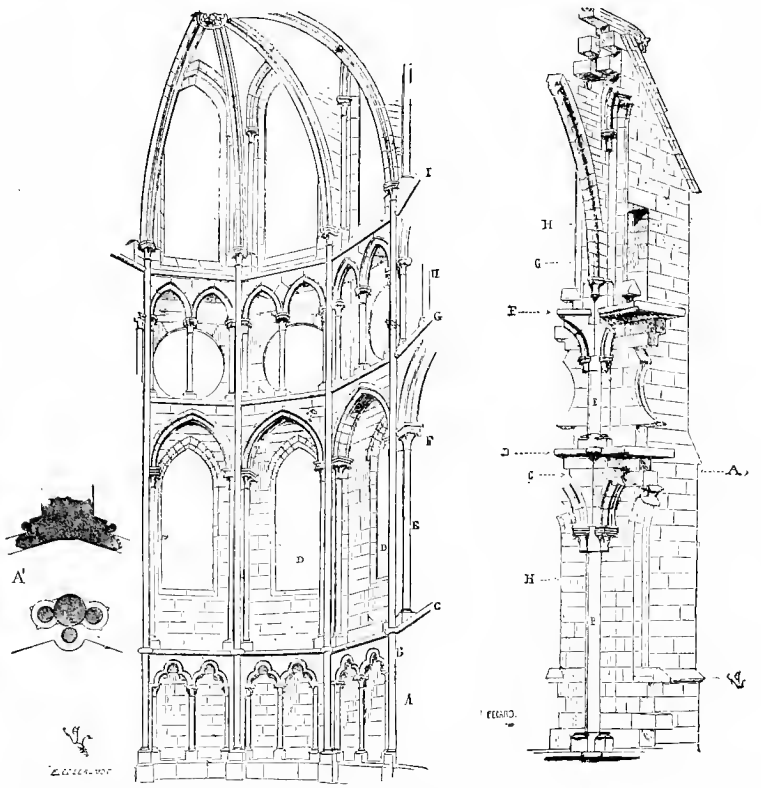
Some years ago a prominent French writer, Corroyer, expressed the



96—Dijon, church of Notre Dame. (From photo.)

theory that the origin of Gothic vaulting was to be found in the buildings of the Angevin provinces of the Southwest, which were then a part of the English domains in France. Their characteristic is the use of domical ribbed vaults, apparently developed out of the earlier domes of this region. It is an amalgamation of southern elements with the new construction. The churches had almost invariably a hall-like char-

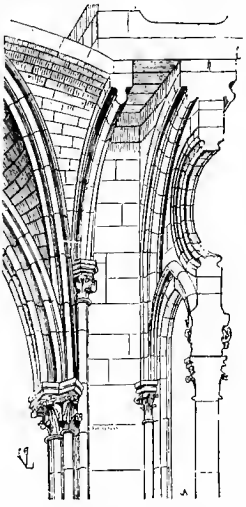
acter, with either a single nave or three aisles of almost equal height separated by very slender supports. At Angers there are several churches which illustrate the different stages of the style. The cathedral of St. Maurice, built c. 1150, is the earliest (Figs. 100–102) and is an epoch-making structure of great interest, offering a different solution of the problem of a well-lighted interior—a vaulted hall. Its



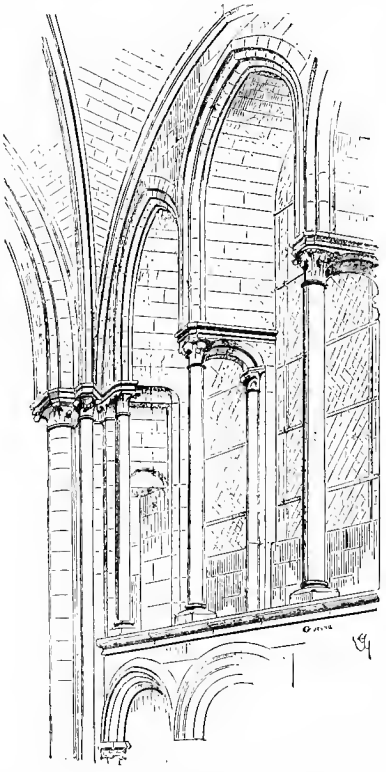
97—Apsidal design and construction of Notre Dame, Dijon. (From Viollet-le-Duc.)

façade is of the normal northern type, with flanking towers. It is in the interior that the originality appears. Like the earlier domical churches it had a single nave, divided into three bays of almost square plan. The transepts and choir each have a similar single bay. Altogether the plan is that of such domical churches of the Latin cross type as the cathedral of Angoulême, with the substitution of domical ribbed vaults. It is interesting to note that there are here three forms of such vaults: the quadripartite in the nave, the sexpartite in the choir and the octopartite in the transept. It must be remembered,

however, that those of the transept and choir are later (thirteenth century). The great width of the span, fifty feet, and the simplicity and massiveness of the detail make this interior impressively successful; of a type of transition quite distinct from that in course of development in the north. All the ribbing is heavier than the northern. The absence of aisles made flying buttresses unnecessary; but the buttress piers are very massive. The coupled windows are of large size for their period. The wall piers have a heavy and strictly logical Gothic memberment. The double wall ribbing and the corresponding pointed arcade below are Gothic in tendency, making it possible to lessen the thickness of the screen and enlarge the windows. This was not a solitary work. The church of La Trinité at Laval, built at the same time, is almost identical in system, more advanced in its ossature, less happy in its proportions. Others were Notre Dame de la Couture and Ste. Radegonde at Poitiers.

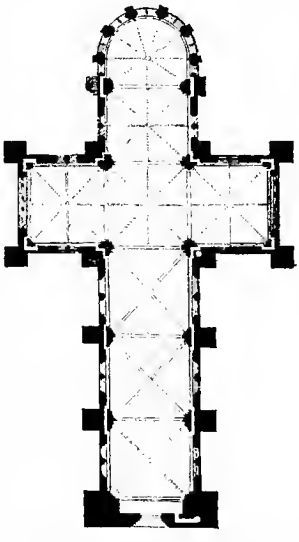


99—Burgundian structural juxtaposition. (From Viollet-le-Duc.)



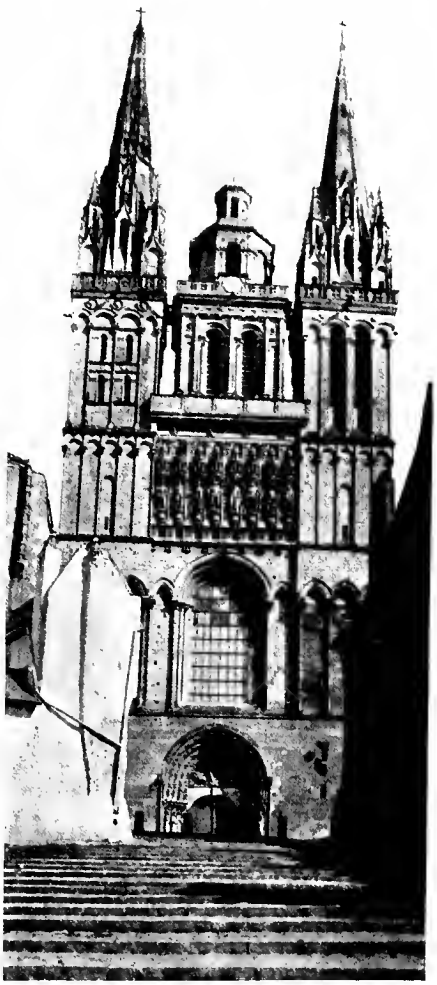
98—Clearstory gallery at St. Jean, Sens. (From Viollet-le-Duc.)

We may as well follow the development of this type a little further. In La Trinité at Angers instead of the Latin cross we have the plain scheme (as at Ste. Radegonde) of three



100—Cathedral St. Maurice, Angers. (From Enlart.)

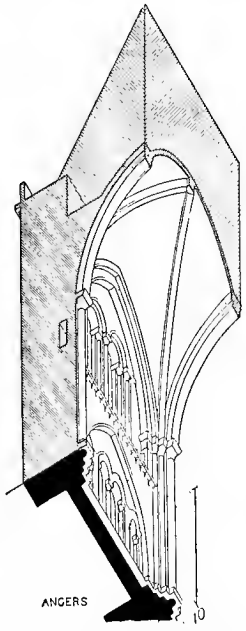
simple bays with a small choir of three chapels. But the great novelty is the transformation of the buttress piers. The plan shows a series of chapels in the nave, of apsidal form, two for each bay, divided by heavy buttresses which project only slightly from the outer wall. Every other buttress—that corresponding to the transverse arch—is heavier in its projection. This corresponds exactly to the alternation of columns and piers in the transitional three-aisled interiors of the Ile-de-France. The intermediary thrust required less counter-thrust. The vaults here, being octopartite, are most closely derived from the domes of the Perigord school. The style remains massive and simple. In St. Pierre at Saumur we find at last the incoming delicacy of mouldings characteristic of the early thirteenth century in the north.



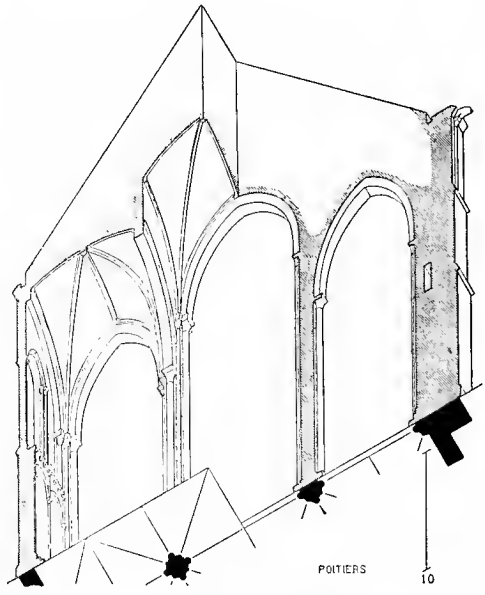
101—Cathedral St. Maurice, Angers. (From photo.)

We have seen the transitional plans in the Southwest with a single nave, and that with side chapels added to this single nave which is to be developed at Albi and Toulouse. There was a third type, that of the hall-church with two naves of equal height or of three naves of equal or almost equal height. Here the plan was southern, but the style was more largely northern than in the previous schemes. The earliest of these hall churches is the cathedral of Poitiers, as important for its type as St. Maurice of Angers and, like it, one of the masterpieces of the Twelfth century. Considering the importance of the hall type in Germany, Spain, Italy, etc., we may fairly call this an epoch-making interior (Fig. 103). The view in

Fig. 104, if compared with the interior of Laon in Fig. 33, will show rival types built at the same time. Taken in themselves—without regard, that is, to the beauty of the class of building evolved out of Laon—one might regard the Poitiers interior as the more satisfactory. What is lost by the absence of nave clearstory is more than compensated by the unity and sweep of the interior. There is here, in about 1162–1170, a slenderness of pier and a delicacy that may have served as an inspiration to the men in the North



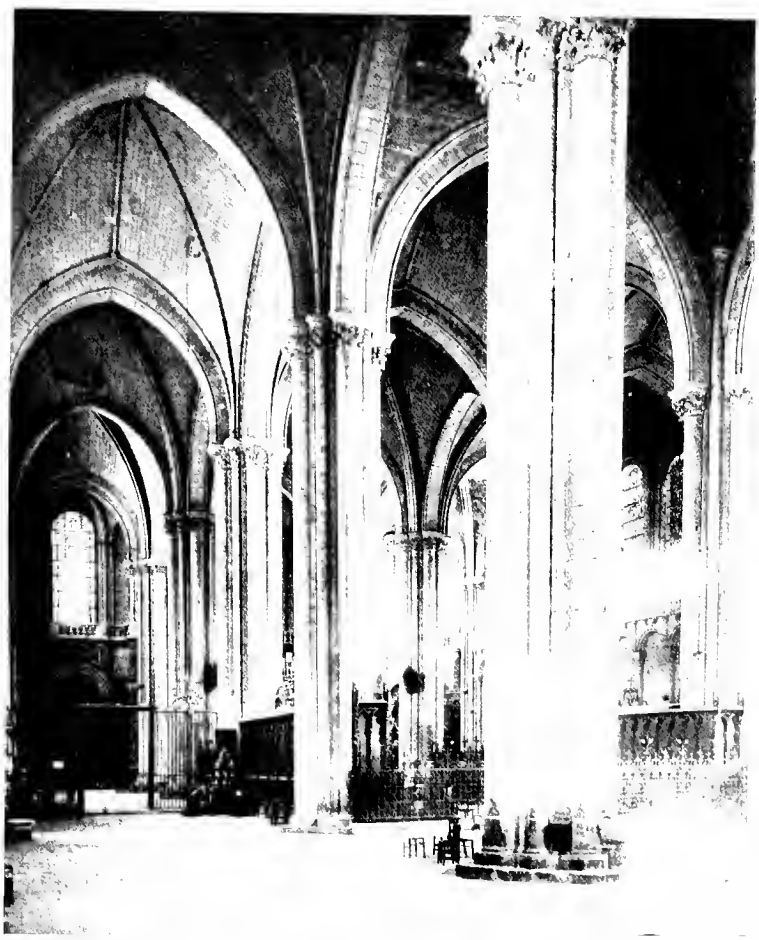
102—System of cathedral, Angers. (From Choisy.)



103—System of cathedral, Poitiers. (From Choisy.)

who built Bourges and the rest at the close of the twelfth century. The square form of the bays and the curved surfaces of the octopartite vaults clearly show the derivation from the dome. But what a contrast between these slender piers and the enormous masses that supported the domes of St. Front! The plan of the piers is of the Romanesque type, a square core with engaged shaft in pilaster offsets. In this interior the design is the same throughout, but the execution of the west end is later and the difference is evident in the more advanced character of the details. The plan is a three-aisled church of eight bays without apse (Fig. 105). The east end is

square and is without chapels. The analogy to English plans is evident. There would seem to be a transept in the fourth bay from the east end, but the projection is more to be considered as a pair of chapels in the foundations of what were probably to have been twin towers. The analogy to English types is also (Fig. 106) found in the façade. The

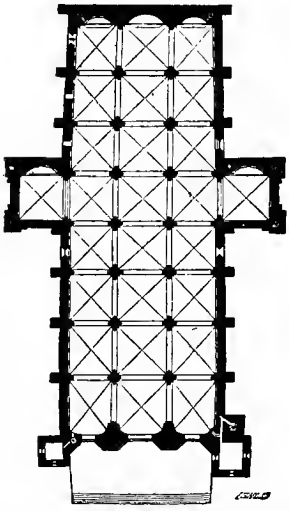


104—Interior of cathedral, Poitiers, from aisle. (From Gurlitt.)

central section is not particularly characteristic in its lower section, which has the northern type of triple connected gabled portal. But the two towers, instead of rising flush with the façade and being bounded by the walls of the aisles, as in the north, project boldly toward both front and side but especially toward the front. We shall find this in English and Spanish Gothic churches and were it certain that it was

a part of the original design of 1161 at Poitiers, its French origin would be unquestioned. In so far as the execution is concerned it is of the thirteenth and fourteenth centuries.

We must return to Angers, and the church of St. Serge. The view of its interior in Fig. 107 shows that the scheme of the hall-church of three aisles of equal, or practically equal, height is here brought to a climax of delicacy. The domical vaults have eight ribs which gather gracefully over a very slender column standing on a high base. Heavier examples of the same scheme are at Gannes and Mezin.



105—Plan of cathedral, Poitiers. (From Viollet-le-Duc.)

The South of France was like a foreign country to Gothic art. Politically it was divided from the North very sharply until well into the thirteenth century, when the wave of royalism and unification reached it. There were, in the latter part of this century, some buildings due to northern architects, like the cathedrals of Clermont, Rodez and Limoges; but the majority were by local architects who strongly modified the style and came under the influence of the Angevin or Plantagenet school. The most prominent southern characteristics are: a profuse use of brick; the absence of figured and decorative sculpture; the plan with a single nave instead of three or five aisles. These hall churches are almost repulsively bare, and this effect is only slightly relieved by the line of chapels inserted between the buttresses. This school extends over Provence and Languedoc and even into Auvergne. Toulouse is the centre for the use of brick instead of stone.

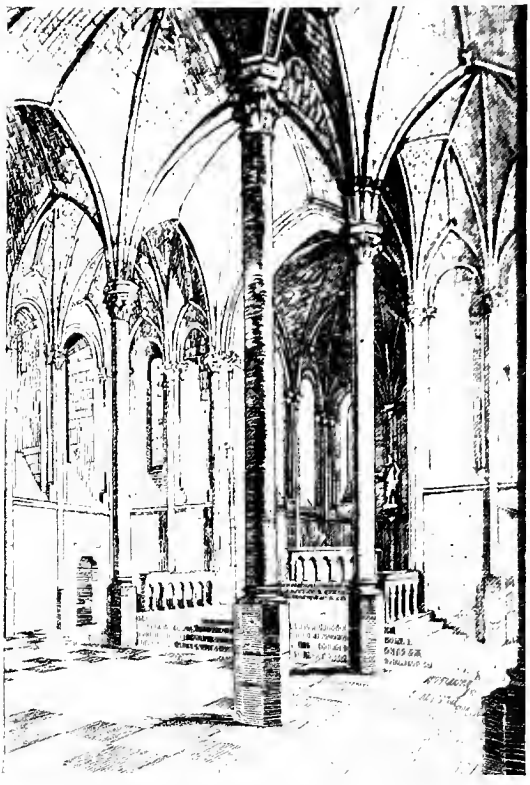
The Cathedral of Albi is a typical building. Its long single nave of twelve bays is flanked by chapels (Fig. 108) separated by the internal buttresses supporting the main vaults, which project slightly on the exterior in a peculiar curved outline. The pointed arches that open into these chapels and the heavy moulded piers between produce almost the illusion of narrow aisles. The clearstory is long and very narrow. The main vaults are among the boldest and broadest in France (Fig. 109). It was begun in 1282.

Its chief interest lies in offering an independent and novel solution

of the equilibrium question, by utilizing as chapels and at the same time as counter-thrusts the space between the buttresses (Fig. 110). Æsthetically the exterior (Fig. 111) is quite as remarkable. A military

106—Cathedral of Poitiers. (From Gurlitt.)

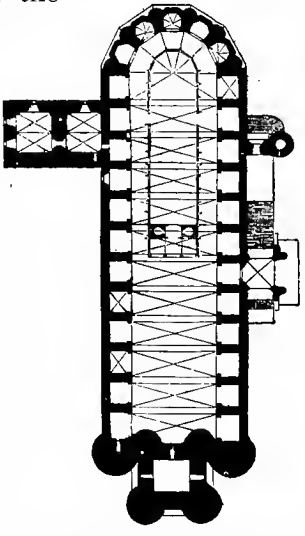
aspect is given by its battlements and heavy tower, and the combined narrowness and height are imposing. The simplicity of the scheme gives particular effectiveness to the decorative features of the portals, which were a later feature, for it is not one of the least remarkable



107—St. Serges, Angers, at choir. (From Dehio.)

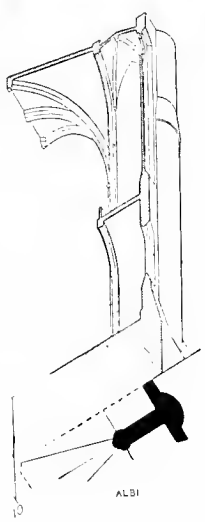
features of this church that notwithstanding its unity it was over two centuries in construction (1282–1512). The portal given in Fig. 112 is a most original specimen of flamboyant decoration.

Toulouse was perhaps the most important architectural centre in the South. Its church of the Cordeliers follows the same type as Albi except for the absence both of the tower in front of the façade and the projection of the buttresses. But we find there, also, the best type of a two-aisled church in developed Gothic style in the church of the Jacobins which served as a model for monastic churches where preaching was important. Not only is a great height given to the vaults but the central line of six columns is of unequalled slenderness. Nothing like it exists in France. It probably served as a model to the Catalan school. There is also originality in the vaulting in the choir, especially in the use of a central shaft (Figs. 113–115). The reinforcing of the buttress piers by heavy wall arches was novel, as well as the substitution of a single octagonal tower on the north flank for the pair of western towers. There is no attempt to add any decorative details to the plain brickwork either on exterior or interior: even the capitals are elimi-



108—Plan of cathedral of Albi. (From Viollet-le-Duc.)

109—Interior of Albi cathedral. (From photo.)



110—System of cathedral of Albi. (From Choisy.)

nated. The octagonal tower has been compared to that of S. Gottardo at Milan.

This church has brought us to the delicate style of the fourteenth century and it will now be necessary to retrace our steps, to take up once more the main stream of development in France and carry it through the geometric, curvilinear and flamboyant stages to the Renaissance.

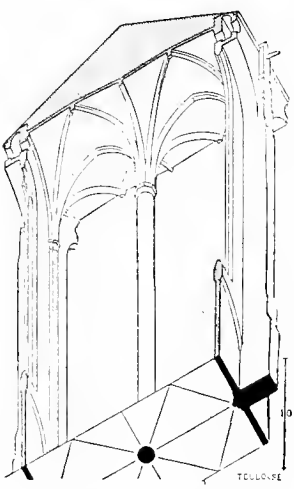
Gothic in France after 1250.—The school of Champagne was not mentioned because, while it has some of the Burgundian peculiarities, it is essentially a progressive school, always in the van and contributing to the bone and fibre of the new movement. It is, in fine, an integral part of the main stem. A view in Fig. 116 of the interior of Saint-

111—Albi cathedral, seen from apse. (From photo.)

Quiriace at Provins, where one can study the change from the simple round arcading in the apse to the trilobated arches with oculus in the transept, will give a good idea of the slight differences between this school and that of the Ile-de-France at the close of the Twelfth century. It has a great resemblance to the Frankish cathedral of Sens. Then,

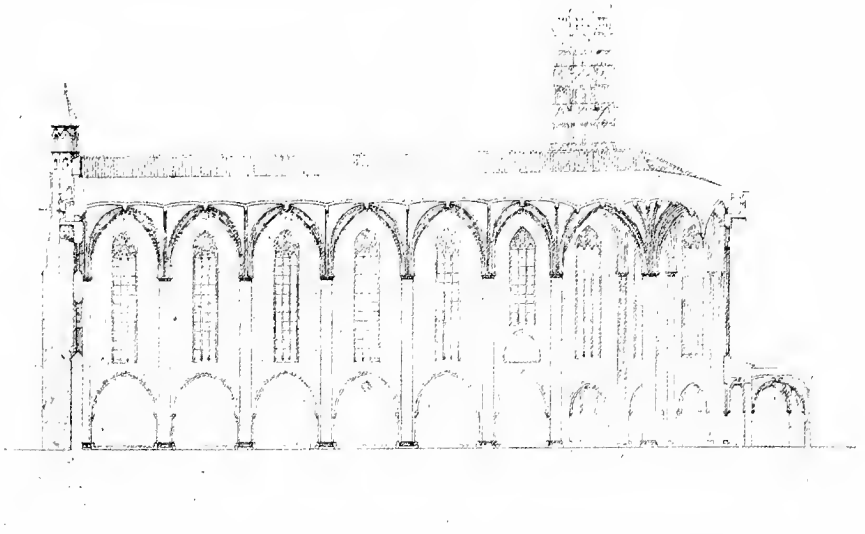
the cathedral of Troyes was planned, soon after 1214, exactly after the new scheme as exemplified at Reims, but with much greater lightness, as shown in the choir, which was the only part then completed. This tendency to eliminate mass became an obsession with the architects of this region, and led it into dominating the movement in tracery and the piercing of solid surfaces. For further developments we will turn again to a chronological treatment.

112—Portal of cathedral Ste. Cécile at Alfi. (From Gurlitt.)



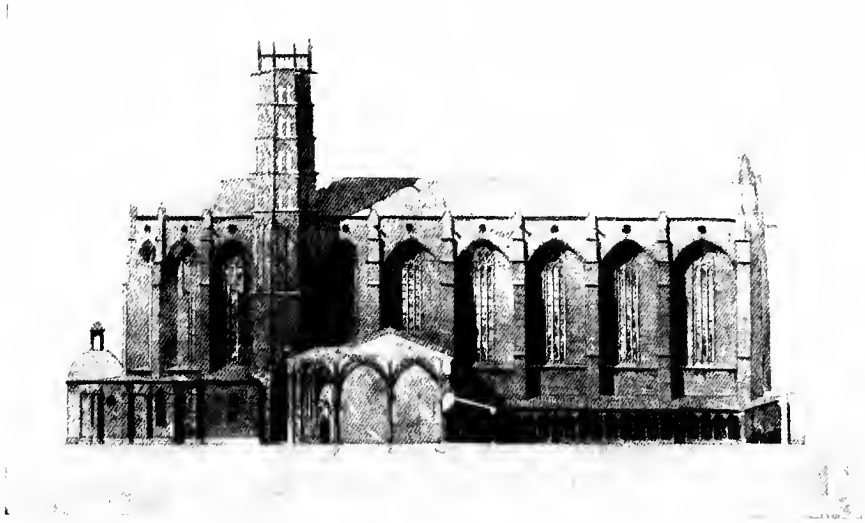
113—System of the church of the Jacobins at Toulouse. (From Choisy.)

We had closed our historic survey of the main strain, composed mainly of the combined schools of the Ile-de-France, Picardy and Champagne, with the decade 1240–1250. In resuming it we are confronted with a group of buildings that show a logical—almost too logical—development of the previous premises. Of these we will study: the naves of St. Denis and of St. Urbain at Troyes. The old nave of St. Denis had been left when both ends had been rebuilt in the previous century. In 1240 the present nave was begun. It is a wonderfully symmetrical and graceful design. Two bays are given in



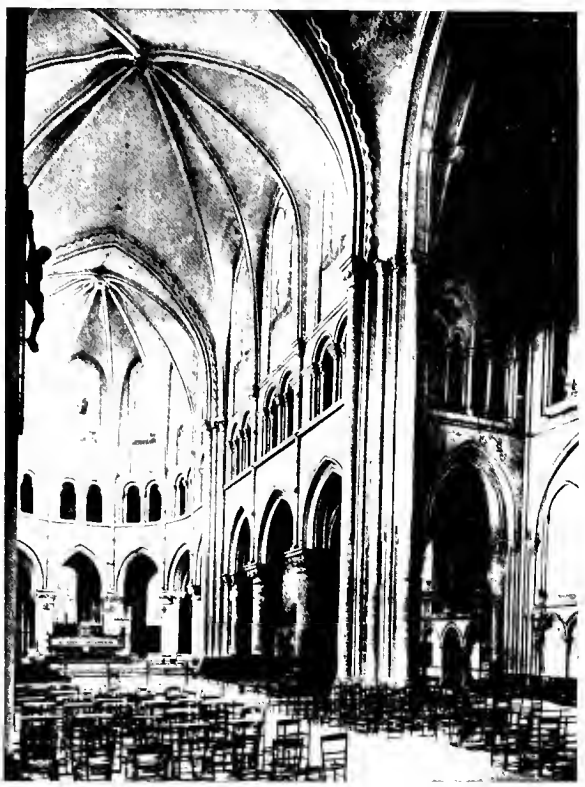
114—Section of the church of the Jacobins at Toulouse. (From *Monum. Hist.*)

Fig. 117 and the system has appeared in Fig. 14. We notice two features: the clustered piers and the lighted gallery. Until now the classic norm for piers had been the circular core with four subsidiary shafts, one for each face: but the plan of making as many mouldings spring from the floor as there were vaulting shafts and archivolts was



115—Exterior of the church of the Jacobins at Toulouse. (From *Monum. Hist.*)

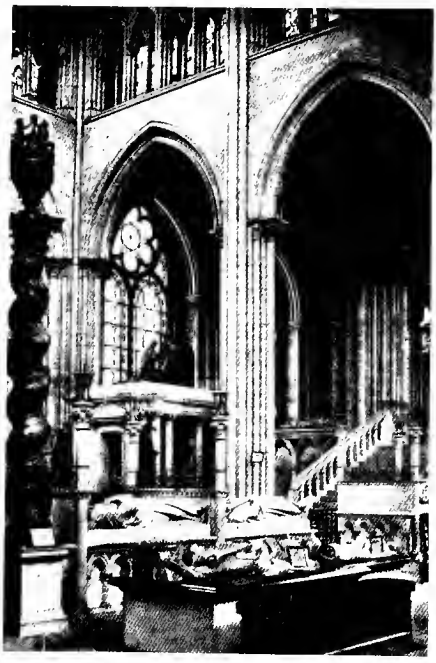
logical and had long since been tried at Meaux, St. Yved at Braisnes, etc. Its perfect formulation at St. Denis led to its general adoption. The second peculiarity, the lighted gallery, was adopted against good structural reasons, because it involved the loss of the pent roof over the side-aisle and the substitution for it either of a pavilion-roof or of a flat terrace, both of these expedients dangerous on account of their inefficiency as water-shedders. The question of carrying off the rain had become an important one as soon as the size and especially the height of the buildings had been so enormously increased. In Figs. 14, 57, 70, 118, we see how at Reims, St. Denis and Beauvais the flying buttress and the buttress piers were used as water conduits in connection with the gargoyles for both the upper and lower roof; an ingenious utilisation of resources not yet practised by the architect of Chartres (see Fig. 48). In both the views of Reims and of Amiens we see how slim was the pitch of the roof over the aisle vaulting, which covered the area of the inner gallery. In order to let in the light at this point, the architect of the Amiens choir, the Cologne choir, the St. Denis nave, the Troyes choir and other constructions planned after 1240, used pavilion-roofs with valleys along the wall-line of the nave and between the roofs. This made leaks far more likely and constant repair necessary, but the idea spread and was applied to porches and chapels, in order to increase the area of light and the unity and logic of the



116—Choir of St. Quiriace, Provins. (From Gurlitt.)

design. The architect of St. Denis may have been the initiator of the novelty.

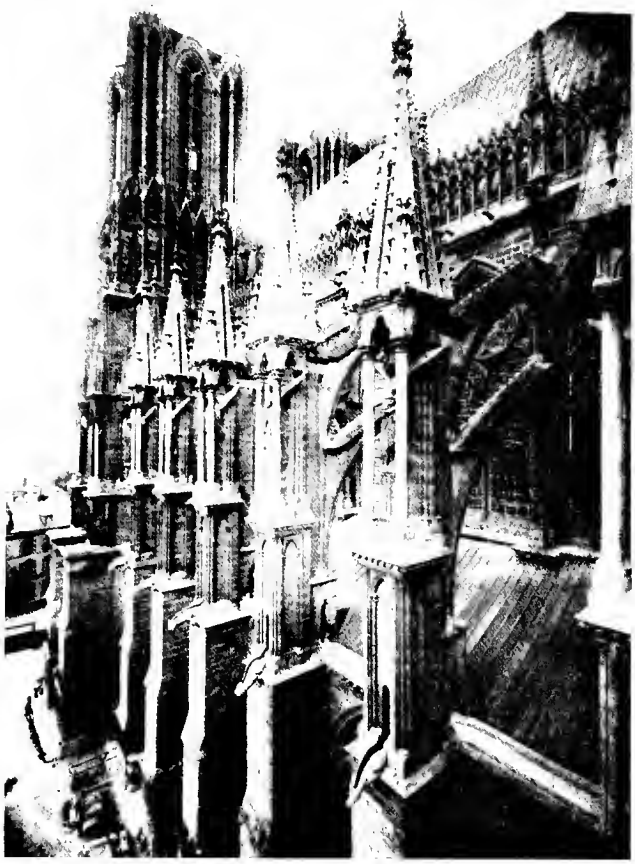
In Fig. 52 a restoration of the exterior of Reims was given as Viollet-le-Duc imagines Robert de Coucy to have planned it. Aside from details the scheme is fairly certain. The spires of the transepts and the crossing were of wood and lead and were burned in 1481: those of the towers on the western façade were never built. Such a reconstruction is very useful, as we are obliged otherwise to use so much imagination in visualising the schemes of the architect of this period. It will serve as a good starting-point, a touchstone for judging of the developments after c. 1250. The city of Reims itself will furnish us with a masterpiece illustrating the next step, in St. Nicaise.



117—Bays of nave of St. Denis. (From photo.)

There is a record of the façade of a church destroyed at the French Revolution, which is here reproduced from a drawing (Fig. 119) because of its unique value. It is the façade of St. Nicaise at Reims, a church built by the architect Libergier in the short space of time between 1229 and 1263. There is nothing remaining that corresponds to it. The façades of Notre Dame and Laon represented twelfth-century types: those of the cathedral of Reims and Amiens are not only in an imperfect condition but have their thirteenth-century nucleus overlaid with fourteenth- and fifteenth-century additions and changes, so that nothing remains of the pure developed Gothic type of the Golden Age because such a work as the Coutance façade represents not the main stream but Norman provincialism. This façade of St. Nicaise corresponds in its way to the aerial ideals of the choir of Beauvais and of St. Urbain of Troyes. It is the apotheosis of delicacy and triumph over matter. The solid part consists merely of the four great piers that divide the façade

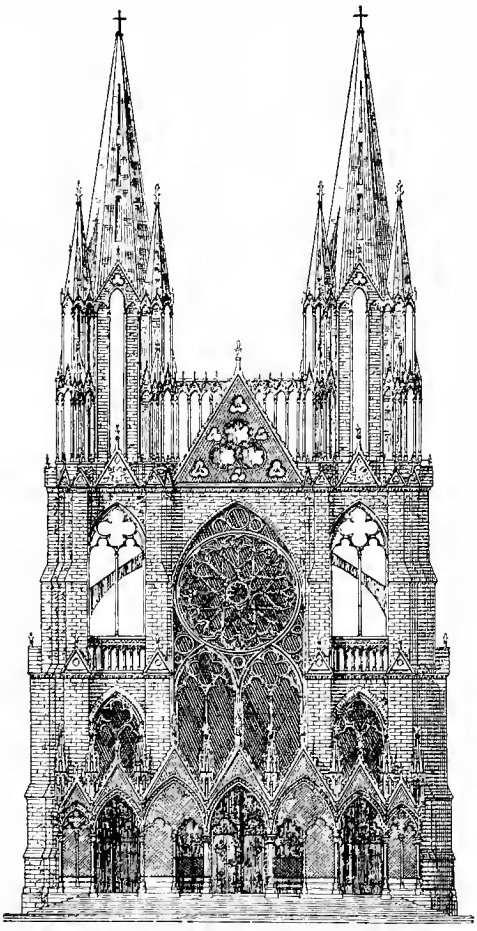
into its three sections, with the arches uniting them. The centre is one enormous pointed window in which the idea of an encased rose or wheel is carried to its ultimate conclusion from the tentative and heavy embryo expressed in the central window of the cathedral in Reims itself. The same window, which, coupled and filled with glass, supports this rose, is used separately as an open



118—Buttress system of nave of cathedral, Reims. (From Demaison.)

arcade in the towers, whose unique lightness is startling. There is a monastic restraint in the simplicity and unity of this design and the absence of figured and decorative ornament at a time when it was so universal. The design of the charming porch, with its simple columns, was a happy solution in the absence of sculpture. Libergier showed himself in this creation one of the greatest among the French

giants. Dehio calls attention to a detail in which his logical originality shows itself: in the placing of the gable in front instead of behind the crowning balustrade. The continuation of the buttress lines in those of the tabernacles of the towers and the union between these and the arcade of the upper balustrade is extremely happy.

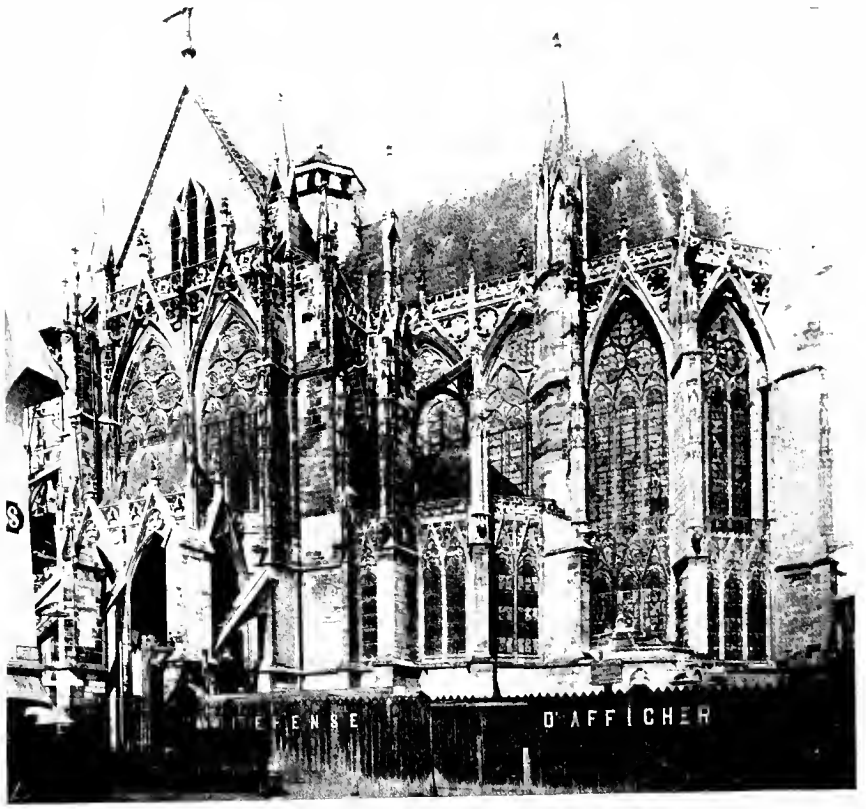


119—Façade of St. Nicaise, Reims, by Libergier, now destroyed. (From Dehio.)

The detail of the wheel window of St. Nicaise, which appears in Fig. 201, shows how the entire front was transformed and the wheel made merely a part of the traceried whole, in a carefully planned and scientific piece of stone-thrusting open work. It is interesting to compare it with the beautiful large roses in the transepts of Notre Dame, dating from about the same time, or a little later, 1257. Here the rose is inscribed in a traceried square instead of a traceried arch and is set on a cornice resting on a traceried arcaded gallery. In such cases it was the good fortune of the architects to have a remarkably fine-grained resistant stone to work with. We have noticed how the architect of Chartres had been obliged to eliminate delicacy of form on account of the quality of limestone he was given. Even the designers of Reims cathedral were prevented from refining their forms,—in particular in the rose-window,—by the comparatively loose texture of their limestone.

The really epoch-making work of the latter half of the thirteenth century is St. Urbain at Troyes, of the school of Champagne, begun in 1262. It marks the apotheosis of delicacy and the culmination of logic in design. It also shows how stone-cutters and architects had come to

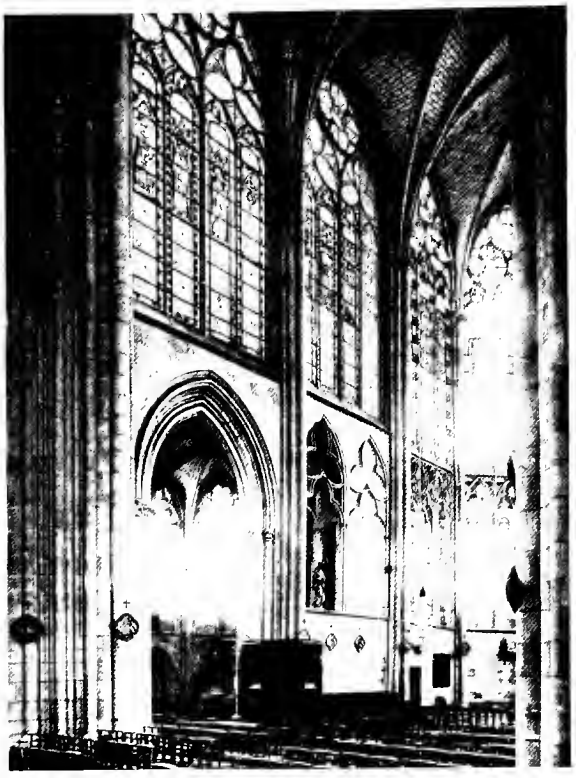
consider the stonework almost as a puzzle made up of innumerable interdependent atoms which preserve their individuality. It is comparatively simple in plan and modest in size; without the orthodox radiating choir. Its interest lies in the wonderful system and perfection of its detail, not merely of such apparent detail as the tracery but the concealed mechanism of the masonry. The main feature of the



120—Choir of St. Urbain, Troyes. (From photo.)

interior is the completed fusion of triforium and clearstory. The extremely open delicacy of the window tracery, more extreme than anything yet attempted, and the extension of the clearstory line down to the main arcade, gave a new model; one that was constructively too dangerous to be popular, though it was followed increasingly in a modified form. The entire onus of stability was thrown on the buttresses and their unusually careful construction is worth studying: also the manner in which the tracery is articulated to minimize the danger of breakage.

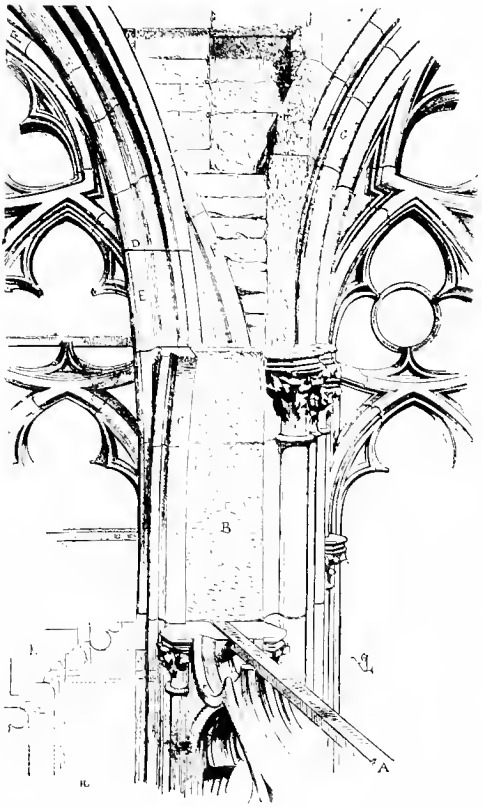
The view of the exterior at the choir end in Fig. 120 certainly makes an impression quite distinct from anything we have yet studied. An analysis will show the reason. The absence of apsidal chapels makes flying buttresses unnecessary at this point, and the buttress piers while very salient are extremely thin and leave exposed to view the most wonderful expanse yet constructed of glazed surface in a major and a minor clearstory extending to the base line. The mullions and tracery are so delicate as to be almost thread-like, and the effectiveness of light and shade is given by the projecting arched gables that spring from the buttresses. These are a Champagne characteristic. They appear even more dominantly over the two windows of the transept. Two details must be noticed: that these gables are traceried and that they break the cornice and balustrade lines. The tracery in the gables and in the masonry of the triangles made between them and the balustrades is one of the most charming innovations, first developed, as would appear, in this building. The same note is struck, in a minor way, in the smaller coupled and tripled gables of the smaller windows below. Henceforth these traceried gables were to become very popular and prominent features, especially over portals.



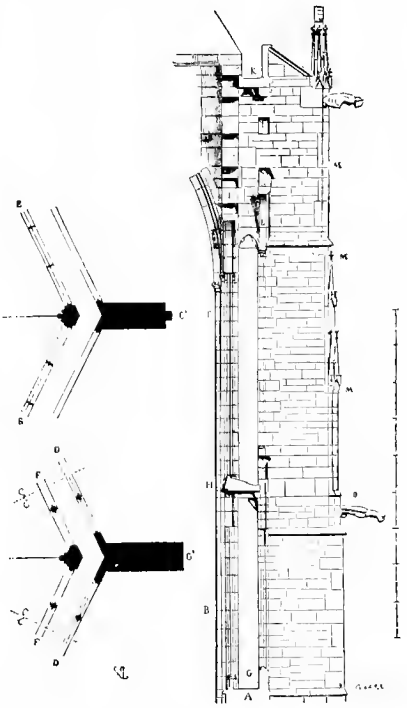
121—St. Urbain, Troyes. Interior. (From Gurlitt.)

In the interior view of Fig. 121 we can study the real strength of the construction and understand how the "fenestrage" is an absolutely independent puzzle-structure that could be taken apart and removed

without interfering with the building. It shows the double system of choir and transept, the heaviness of piers and lower wall-screen, involving elaborate archivolts. A few details will show the methods employed. In Fig. 122 the interrelation of windows and vaulting is made clear: in Fig. 123 the screen-like system of the apse. The novel coupled windows of the lower part of the apse are given in Fig. 124.



122—Dissection of windows and vaulting of St. Nazaire, Carcassonne. (From Viollet-le-Duc.)



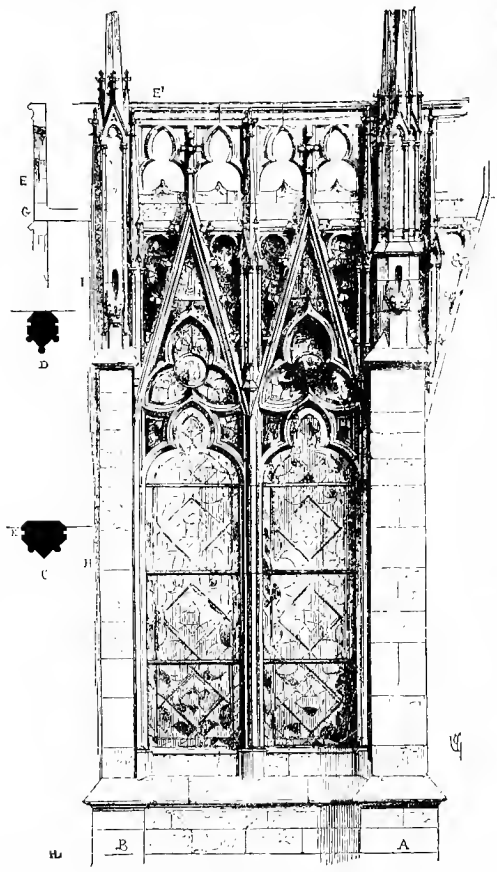
123—System of apse of St. Urbain, Troyes. (From Viollet-le-Duc.)

Here was carried out on a large scale the novelty of tall traceried gables over windows breaking the line of balustrade. This is shown in detail in Fig. 125.

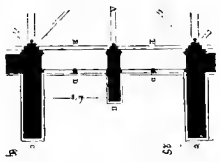
The fourteenth century was for France a period of architectural nullity, on account with wars with England, the English occupation, the internal chaos, the social disruption, the poverty and depression among all classes. When England was at her highest point of architectural prosperity, and Flanders, Germany and Spain were evolving

new types, France, after giving her new style to Europe, saw her architectural history interrupted at a point crucial for the majority of her most important buildings. Only a few buildings need be studied for this period and until the opening of the flamboyant age. The most monumental is not a cathedral but a monastic church, St. Ouen.

In St. Ouen at Rouen, we have a building of cathedral dimensions, planned in the fourteenth century, and representing the highest achievement of orthodox French Middle Gothic. Though in Normandy it belongs less to the local school than to the general trend. There are important portions, such as the central tower and the rose-windows and portals of the transepts which show the flamboyant style of the period of their construction in the fifteenth cen-



124—Lower apsidal window of St. Urbain, Troyes. (From Viollet-le-Duc.)



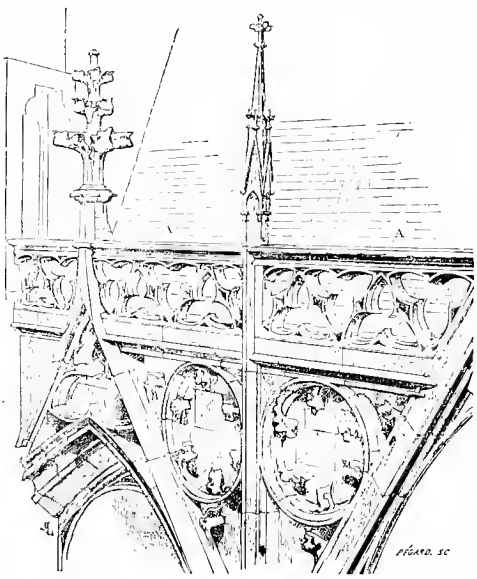
124*a*—Plan of window at St. Urbain, Troyes. (From Viollet-le-Duc.)

tury, but the interior was carried out quite consistently on the original lines, laid down, probably, before building was commenced in 1318.

The façade may be at once eliminated, as it is a commonplace modern work which involved the barbarous destruction of what had been built at this end in the fourteenth century, including an interesting diagonal placing of the twin towers, which involved a polygonal ending to the interior of the façade. But the façade of the south transept has originality and charm. Below the famous flamboyant

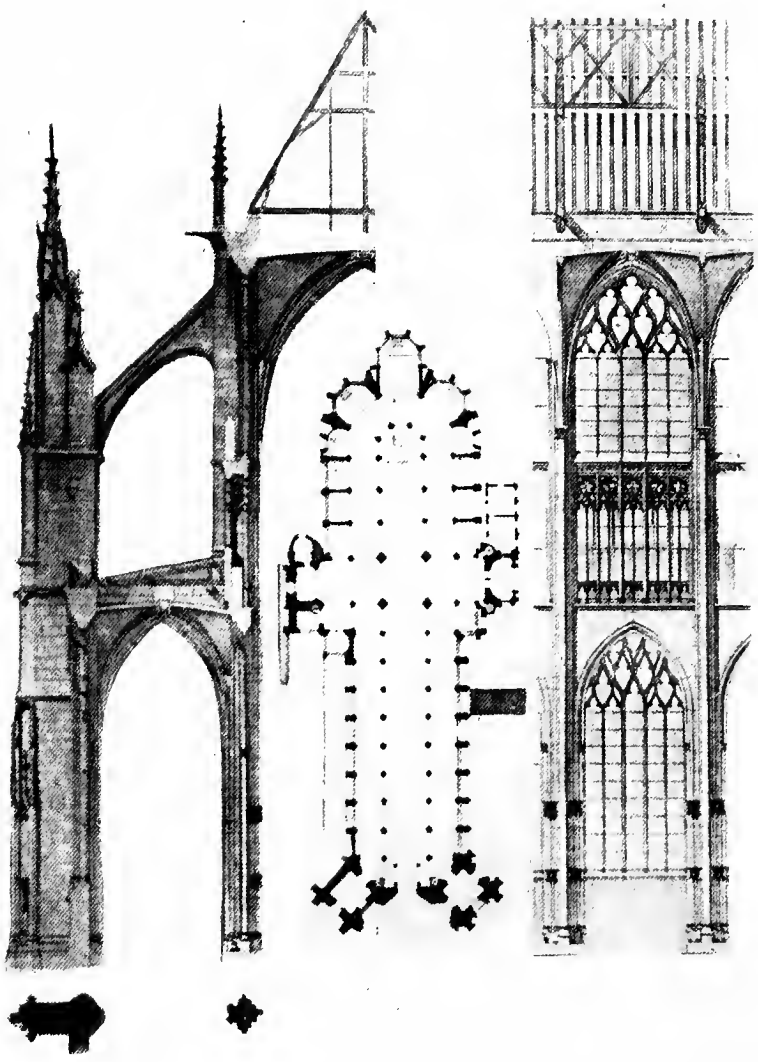
rose-window by Berneval, the design is of the greatest simplicity with two acutely pointed windows above an open porch—the Portail des Marmosets.

The *chevet* shows the earlier exterior work in its geometric simplicity. It illustrates again how the monastic churches, as already noticed in the case of St. Nicaise at Reims, were the enemies of sculpture and decoration: pinnacles, buttress-piers and flying buttress are all of this type. A few crockets and a thin balustrade are the only decorative features.



125—Balustrade over upper choir windows of St. Urbain, Troyes. (From Viollet-le-Duc.)

The effect of the interior of St. Ouen (Fig. 126) is so different from that of the cathedrals of the thirteenth century that it is worth while examining into its causes. A comparison with Fig. 14 will show that it is an evolution of the St. Denis type, carried to its ultimate conclusion. Not only are the main piers clustered, and the mouldings corresponding to the main vaulting shafts carried up without a break, but this idea of the unbroken sweep is transferred to the shafts that correspond to the archivolts of the arcades, and their lines sweep unbrokenly to the crown of the arch except in the central shaft where the necessity of giving a flat surface to the inner face of the arch made it necessary to crown the semi-circular shaft by a small capital. The fusion of the triforium with the clearstory is made more complete by giving greater importance to the triforium, completing its tracery in the angles and so eliminating wall surfaces that the effect is of a single design. The entire space above the main arcade is in this way converted into an immense glazed surface, with the glass held in a framework so slender as to approach metallic effect, in the same way as we noticed in St. Urbain at Troyes. It is true that the arcading of the triforium gallery is much lower than the glazed openings in the outer wall, but this fact is concealed from the spectator who

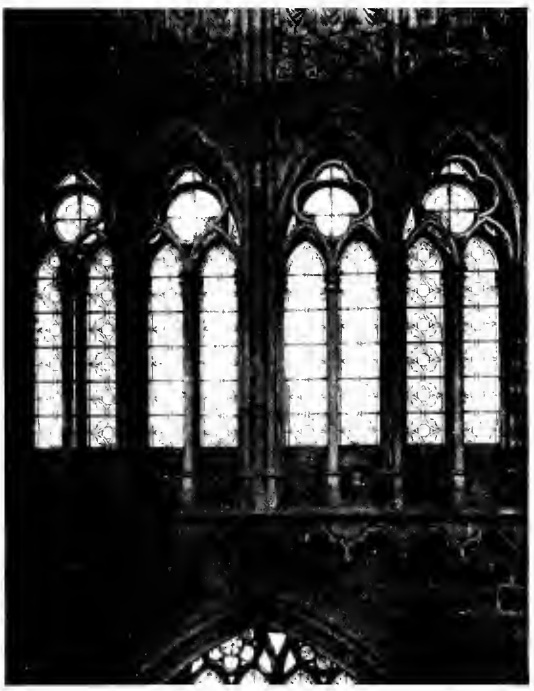


126—Plan, section and bay of St. Ouen, Rouen. (From *Monum. Hist.*)

stands on the ground floor and it allows of an inclined roof in place of the inadvisable pavilion roofs. It must be remembered that in its actual construction the nave of St. Ouen was not earlier than

the fifteenth century, only the choir and part of the transepts belonging to the previous century; but the design is fundamentally the same after a century and a half, though the tracery is flamboyant.

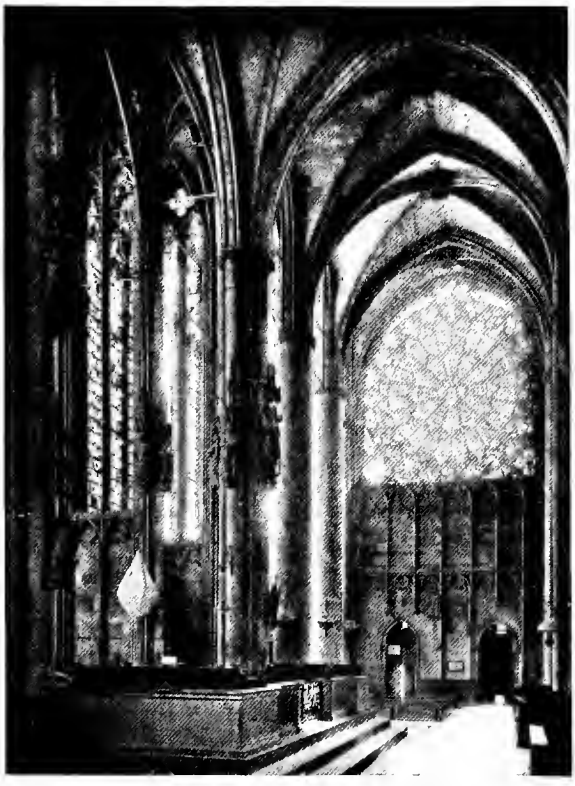
An intermediate stage between the St. Denis nave and that of St. Ouen is represented by the magnificent nave and transept of the cathedral of Metz, built, it is supposed, by an architect of the school of Champagne shortly after 1332. Here the aisles are sacrificed to the nave, which exceeds in height even that of Amiens, being over 43 metres to Amiens' 40 m. and St. Ouen's 32.50 m. Here the triforium is glazed but its tracery is not elaborated nor its wall space traceried, but there is an extraordinary development given to the clearstory windows showing the influence of the Troyes school. This is emphasized on the exterior by the steep gables crowning these wide windows. As they interrupt the cornice and balustrade which ordinarily are continuous, they add an unusual picturesqueness and are evidently a richer form of the type of St. Urbain of Troyes. (Fig. 127.)



127—Triforium of Cathedral of Metz. (From Gurlitt.)

There is greater individuality in another building: the cathedral of Carcassonne, St. Nazaire, where one sees the germ of certain features that fully emerge in the flamboyant age. The nave is Romanesque; the east end was built between 1310 and 1320. In a way it was an invasion of the south by the northern style, but as Fig. 128 will show, it was a curiously original style. The pier on the left is a regular Romanesque pier, similar to the old piers of the nave, while the pier in the right is columnar, not with the squat proportions of Notre Dame but with the elongation that presages the flamboyant

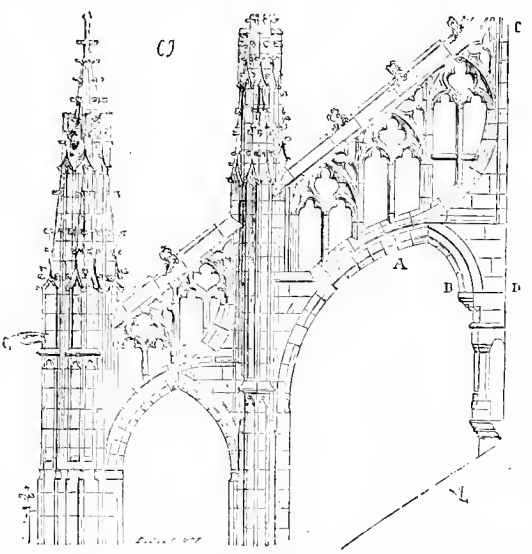
buildings such as Saint Nicolas-de-Port. The probability is that this columnar feature should be connected with the school of Toulouse where it had appeared in such buildings as the Jacobin church with even greater slenderness. Structurally this choir is most skilfully and scientifically planned. The bays differed in width in every case, yet the crowns of the vaults were level. We see in Fig. 128 how this was managed. The way in which the vaulting ribs above the right-hand pier emerge from the wall surface at varying levels, in order to obtain the correct vaulting cells, presages the methods of the flamboyant period. It is evident that here as in Saint Urbain at Troyes, the architect prepared his working drawings with the greatest abundance and accuracy, and that each stone, cut in advance, was adjusted like the parts of an elaborate puzzle.



128—Choir of St. Nazaire, Carcassonne. (From Gurlitt.)

When France began to recover from the disastrous wars with England and the consequent chaos, and again undertook building on a large scale, her architects developed a style of decoration which is called Flamboyant, and which gives its name to the last phase of the style before the advent of the Renaissance. There has recently raged quite a lively controversy as to French flamboyant between M. Enlart and M. Anthyme Saint-Paul. M. Enlart champions the theory that it was derived from England, while his adversary maintains that French flamboyant was an independent movement analogous to the English. Though flamboyant forms appear at Amiens

cathedral in a chapel built as early as 1373, it did not attain to general popularity until after 1400. In England, as will appear, all the elements of the flamboyant existed in the later decorated style before 1350. Without denying the transmuting hand of French artists, it seems undeniable that England by giving France her flamboyant was paying back some of her earlier architectural indebtedness. Here, again, we must read history in order to understand how the great French schools of the thirteenth century had been wiped off the slate by the political and social disruption of the fourteenth century when France practically ceased to exist as a nation. It is an interesting fact that while France was in process of absorbing flamboyancy from England, England was abandoning it for the Perpendicular.



120—Flamboyant buttress of St. Wulfran, Abbeville. (From Viollet-le-Duc.)

A few words as to the main characteristics of the flamboyant. It was, of course, the flame-like curves of its tracery that gave to it its name: this sinuosity was applied to the mouldings and its key-note is the reverse curve. Every curve called for its converse curve. This passed also into the constructive field, resulting in reversed curve arches, of which the earlier Moslem types were illustrated in O and P of Fig. 173 on p. 189 of Vol. II. While appearing constructively in some buttresses, as in those of St. Wulfran at Abbeville (Fig. 129), it was mainly used in connection with openings either in the tracery and subsidiary forms or in the form called "en accolade" where the hood-moulding or the outer archivolts are treated in this form, or where the arch itself as a whole has the reverse curve when it is not constructive but decorative. For structural arches the normal pointed arch continued the rule, but for doorways and windows the form called "anse de panier" or basket-handle arch became quite common (see Fig. 134).

When one reflects on the way in which, since the close of the thir-

teenth century, tracery and surface decoration had dominated the design, it is evident that the substitution of these swaying, sinuous interweaving curves for the straight lines and abrupt terminations of all previous French design, made a radical change. French archæologists call the main forms of tracery that resulted by the terms "soufflets" and "mouchettes," which mean, literally, "bellows" and "snuffers."

The English influence appears also in a second important innovation, the use of forms of vaulting both structural and decorative, that differed from the plain ogival vault thus far uniformly used, with its four plain vaulting compartments. The simple diagonal ribs were now either supplemented or supplanted by the ribs called *liernes* and *tiercerons*, which will be explained under English architecture, where they originated. To these again were added other ribs and finally, under Flemish influence, there was at times a tapestry-like decoration of the vaulting surfaces and even of the ribs. The design includes also the stalactite-like hanging key-stones, of which the interior of St. Pierre at Caen is an interesting example (Fig. 137).

Passing now to the piers, capitals and mouldings, the break with earlier work is almost as clear. The capitals are to a great extent suppressed in order to facilitate the merging of the lines. This is the rule in the minor forms, in doorways, windows, etc.; in the case of the main piers of the interior there is often a simple or decorated band or frieze in place of the capital, and to this scheme a simple moulding corresponded in minor forms. The piers themselves are quite differently formed. They are often either frankly columnar, as at St. Nicolas-de-Port, or their projecting mouldings are so delicate and lacking in body and projection that they are rather like arrises or flutings of antique columns than like the individualistic shaftings of the old school (Fig. 130).

The changes in the shaft and capital involved a change in the treatment of mouldings, archivolts and the springing of the vaulting shafts. Instead of starting frankly from the floor line or from the capitals they often emerge or evolve from the body of the masonry, without any strong horizontal demarcation. When we remember the heavy brackets and consoles of the earlier periods the change is significant of the new ideas of fusion of lines.

Perhaps there is another trait due to English influence: the relative lowness of the vaulting and the loss of vertical effects. The vaults of St. Wulfran at Abbeville are, to be sure, 31 metres high, but those of

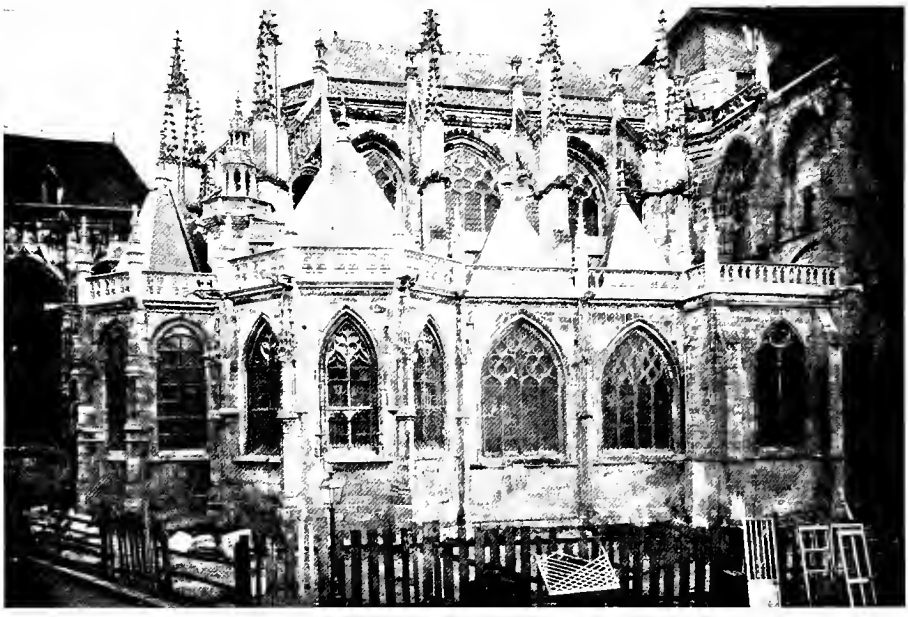
St. Riquier and of St. Maclou at Rouen only 24 metres. The overloaded ornamentation, often heavy in its detail, borrowed partly from England and partly from Flanders, included an abundance of traceried galleries, which with their horizontal outlines often overpowered the vertical lines. This was in part counteracted by excessive acuity and elongation of the gables over doors, porches, windows, and other details. With this there often went a tapestry effect in decoration. The old effectiveness of light and shadow, of contrast, gave way to surfaces only slightly broken up by a thin or flat ornamentation lacking in vitality. At times, as at Notre Dame de l'Epine, the excessive ornamentation which we note, for example in the choir of Mont St. Michel, is in abeyance and we find an abundance of flat surfaces such as we have not seen since the transition.

130—Spring of vaulting and pier, St. Maclou, Rouen. (From Viollet-le-Duc.)

In assigning certain traits to the entire movement it must not be forgotten that there was not absolute uniformity. It is true that the old French local schools had been killed during the English wars: but two factors must be reckoned with, (1) the greater amount of English influence in Normandy, and (2) the existence, both north and south, of a strong Flemish influence. Flanders had been enjoying uninterrupted prosperity and was then reaching the height of her artistic development. In Norman territory, which is especially rich, the old manner retained more elements in the new style; there was less of the basket-handle arch, less of the reverse curve in "accolade," however much it dominated in tracery.

Among the few flamboyant churches in which the ornamentation was rich and yet not excessive, and the composition harmonious in its lines, the most satisfactory is St. Maclou at Rouen. The extreme delicacy of its stonework, especially in the gables and galleries, has, to be sure, led to considerable damage from storms, involving renewal

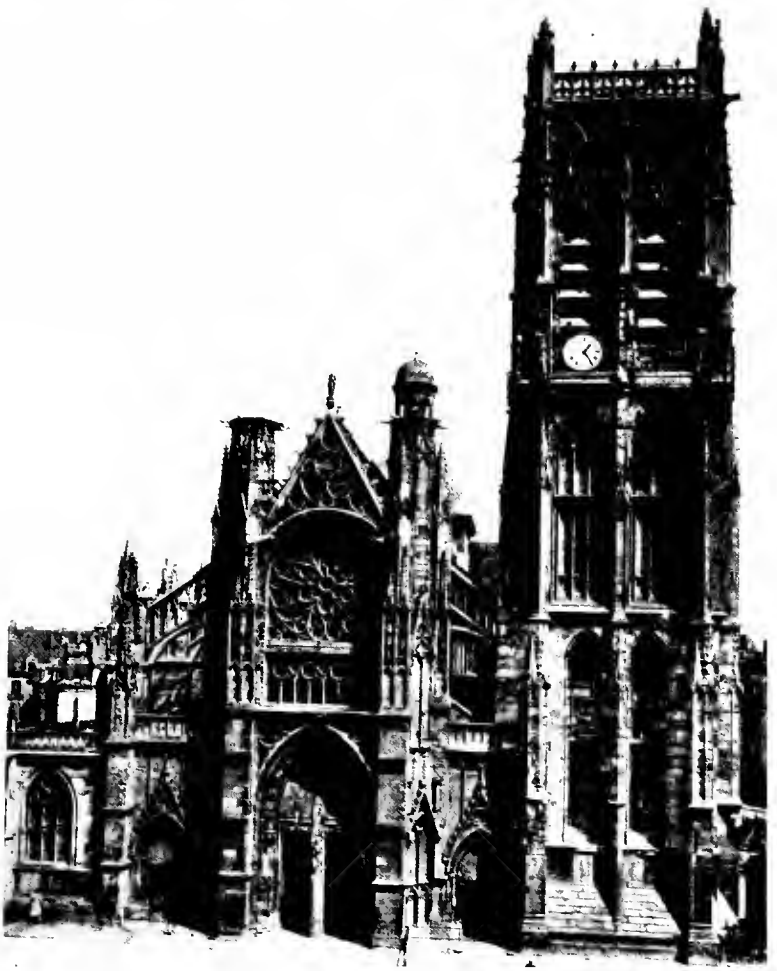
of many details. Also the tower became so unstable that it was found necessary to entirely rebuild the spire. It is difficult to obtain a satisfactory view of it as a whole owing to the way the town crowds it. So I give a plate of it from the original model made by its architect (Pl. I). I was so fortunate as to identify the model as the original project of the architect and not a copy made a couple of centuries later. It is, I believe, the only model by a Gothic architect that has been preserved. One of the novelties of the period illustrated in this façade is the polygonal porch, which breaks up the usual straight façade profile.



131—Choir of St. Pierre at Dieppe. (From photo.)

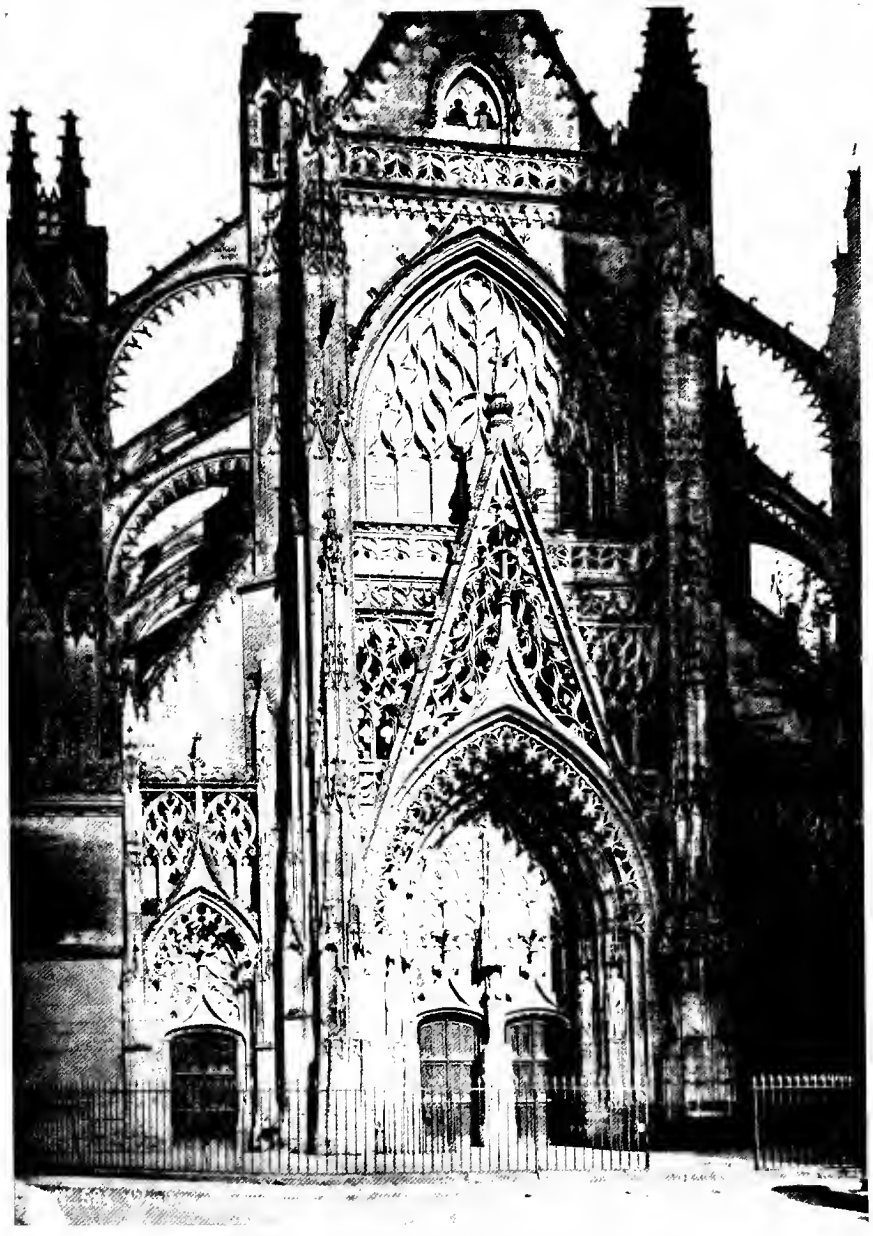
Its five arches with their high open-work gables form a sort of pendant to the apsidal termination. It is a peculiarity to be seen in other buildings of this time, especially in Normandy—at Argentan (St. Germain), Alençon (Notre Dame), and at Abbeville. Taken as an element in the composition it must be confessed that, given the premise of a central tower as high as this, with as short a body for a base to it, the pyramiding effect produced by setting this boldly projecting porch with receding ends in front of the façade, is exceedingly felicitous. This pyramidal effect is helped by the solid richness of the buttresses whose diagonal profiles are continued in those of the central gable. A comparison of the details of the model with those of the

church is interesting for two reasons: first, because it shows how closely an original plan was adhered to by the successive architects in charge of a building for at least a century; and second, because we can trace in this way the changes that occurred in tracery and orna-



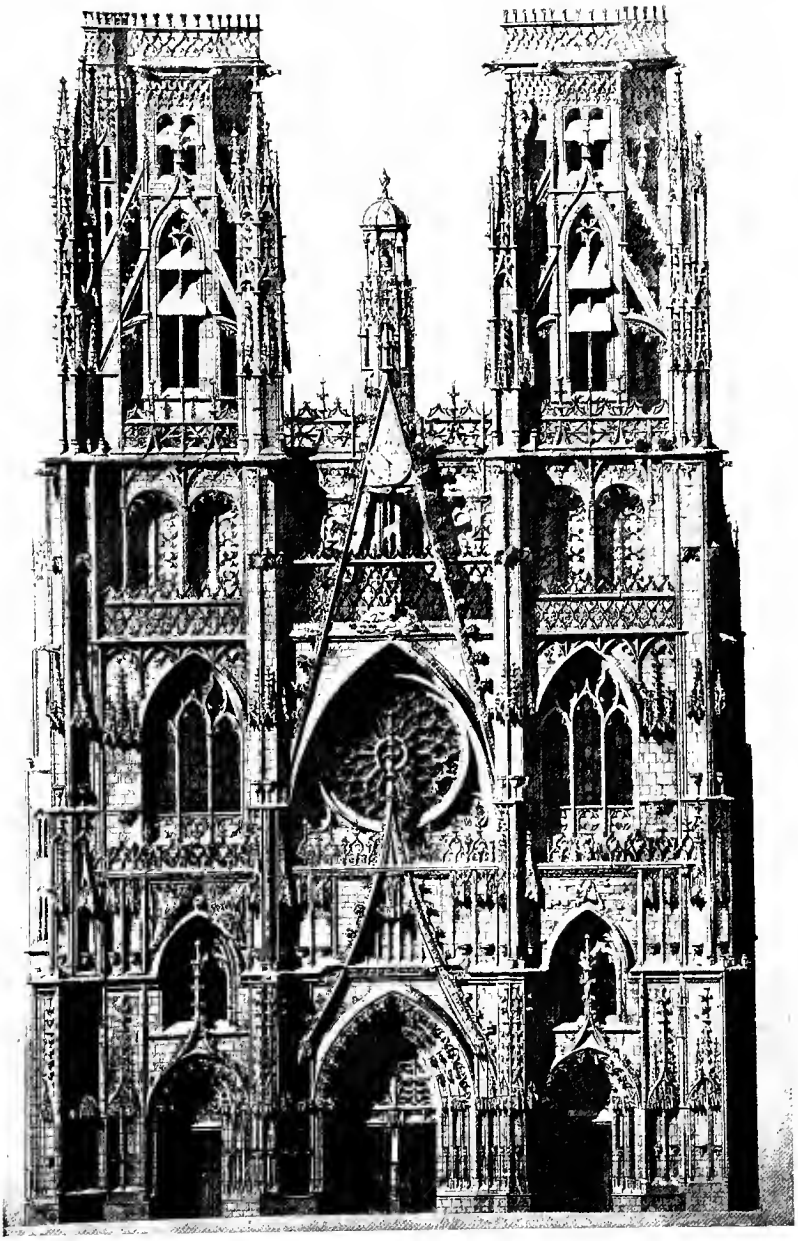
132—Façade of St. Jacques at Dieppe. (From photo.)

ment between about 1420 when the model was made and about 1500 when the church was completed all but the upper part of the tower. Also, as the original spire had to be taken down in the eighteenth century, the elaborate spire of the model is our best evidence as to its design. It is extraordinarily rich and formed in its lower half of open receding stories, surmounted by slanting stories of openings,



133—Façade of La Trinité, Vendôme. (From photo.)

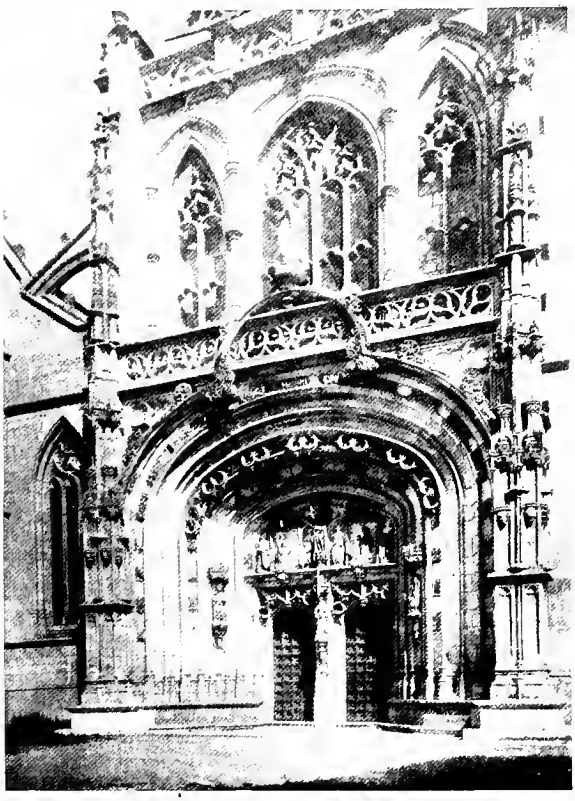
with heavy finials. Its loss is irreparable, as no spire exists in France of this rich stone open work comparable to that of Strassburg and other German master-pieces. One can also study in this model the



134—West front of cathedral of Toul. (From *Monum. Hist.*)

galleried buttresses of the style just preceding that in Fig. 129, the extremely pointed and open traceried gables and the galleries connecting them with the corner pier-finials: a composition so fragile that it has been, in the church itself, largely destroyed by wind-storms.

In connection with this tower of St. Maclou, one should study the two most important remaining French towers of this style: the "Clocher Neuf" of Chartres and the Tour de Beurre of the cathedral of Rouen.



135—Façade of chapel of Brou at Bourg. (From photo.)

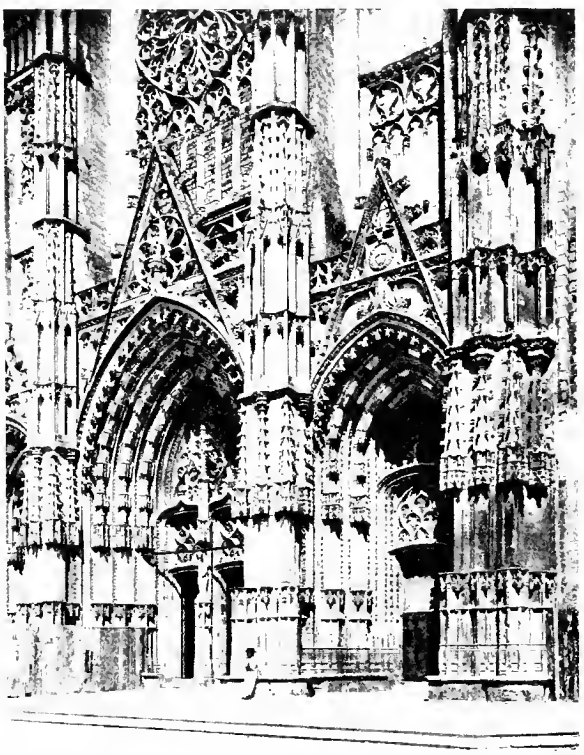
In Fig. 49 the arrangement and the contrast to the transitional tower on the right can be seen but on too small a scale to show the change in treatment of details during the intervening three centuries.

Normandy is richer than any other section in buildings of this style: Notre Dame at Alençon, Saint Germain at Argentan, the choir at Mont Saint Michel and churches at Dieppe and Caudebec. In Picardy and Artois the most interesting buildings are Saint Riquier and Saint Wulfran at Abbeville. Further east, near Châlons, there is the charming Notre Dame de l'Epine and the chapel at Brou; and in the centre the façade of the Cathedral of Tours.

Many buildings begun on a large scale in the thirteenth century and left unfinished through the disastrous years of the fourteenth century, were added to and completed in the happier days of the flamboyant. This was the case with the cathedrals of Amiens, Rouen, Tours, Chartres and a host more. In fact, it is more interesting

to study flamboyant work in the grandiose setting of these early works than in the poorer and smaller buildings entirely built in the flamboyant age. The portals of Rouen cathedral and the rose windows of Amiens and Saint Ouen are especially finished productions. The chapel of Cardinal de La Grange at Amiens, built in 1375, is now thought to be the first flamboyant work of any consequence.

In the view of the choir of Saint Pierre at Dieppe in Fig. 131 we get a good idea of the pavilion roofs over the chapels which were more popular in Normandy than elsewhere, though in this particular case both roofs and parapet are a restoration. The tracery in the different windows, belonging to four types, illustrates the great diversity of design in flamboyant tracery. The two late types of flying buttresses—the traceried buttress and the slender cusped buttress—are illustrated in Figs. 132 and 133.



136—West portals of cathedral of Tours. (From Gurlitt.)

The façade of St. Jacques at Dieppe in Fig. 132 is practically a reduction of that of the Cathedral of Rouen, with a single massive tower on the right in place of the two towers. It shows how the Norman scheme of detaching the tower from the façade was continued till the end. It allowed the architect to eliminate the heavy mass of masonry at the façade and the awkward approach to the interior which were the bugbear and exercised the ingenuity of the architects of the orthodox type.

One is tempted to dwell on these flamboyant façades. That of

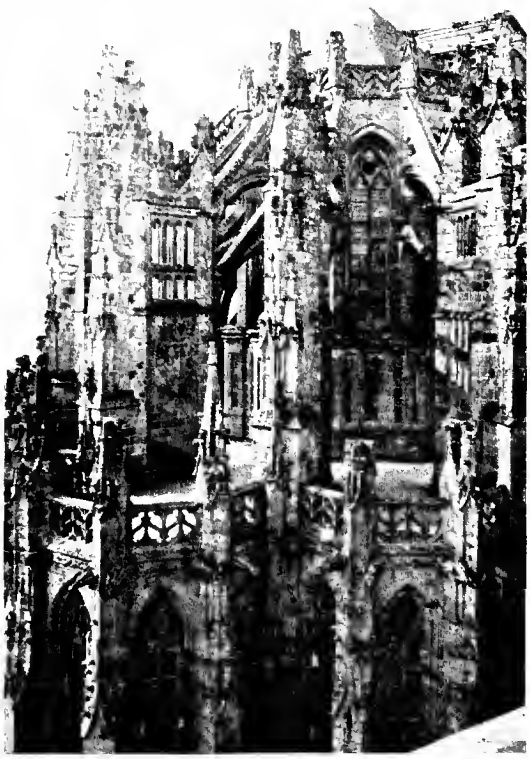
La Trinité at Vendôme (1492–1529), given in Fig. 133, is a wonderful bit of decorative design in its panelling and balustrades, enclosed in very plain masonry. This contrast is one of the differences between early and late Gothic in France: in the early and middle periods the decoration was more evenly distributed. There are some flamboyant façades, however, where this idea of distribution is very successfully carried out and seems to entail also a certain repression of the usual exuberance. The most symmetrical of these façades is the admirable west front of the Cathedral of Toul, which adheres to the old-fashioned scheme quite faithfully. There is a curious asymmetry in the centring of the windows and portals on either side as compared to that of the towers. Its architects were Tristan d'Hattonchatel and Girard Jacquemin and it was built between 1460 and 1547 (Fig. 134).

137—St. Pierre, at Caen. (From photo.)

One of the gems of this style is in the southeast, near Bourg, at Brou, which illustrates the considerable share taken by Flemish art in certain phases of French flamboyant. This is more a memorial chapel than a church, and contains three magnificent mausoleums: of Margaret of Bourbon, her son duke Philibert and his wife Margaret of Austria, which are among the masterpieces of decorative and figured sculpture of the early fourteenth century, and, with the rich *jubé* or choir-screen and the stalls, largely characterise the interior. Their over-rich ornamentation complement the flamboyant details of the architecture. The scheme has more unity than is usual between furniture and architectural design, especially as instead of wooden carving, the screen is of stone. A view of the main portion of the façade in Fig. 135 will serve to epitomise most of the best characteristics of the various flamboyant specialties. There is none of the confusion and crowding of some other contemporary works; nor is there any of the

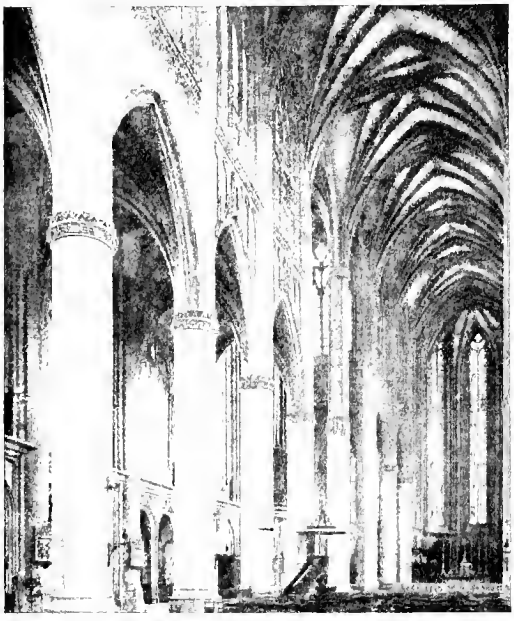
elaborate tracery, the open-work and acutely pointed gables, such as appear at Amiens and elsewhere. On the contrary, the detail has strength and firmness. A dominance of round arches is one of the signs that we are approaching the very closing days of flamboyancy and the advent of the Renaissance. This is natural, for the church was not begun until 1506 and completed in 1536. The main portal is a noble example of the low curved arch called "anse de panier."

The most imposing of the façades that were begun in this style is that of the Cathedral of Tours. But its effect was marred by the domical crowning of the towers in Renaissance style. Evidently the spires were to have started on a level with the summit of the characteristically sharp gable, but the Renaissance designers filled in the double arcade opposite the gable, which were originally traceried windows and above the next story made a solid base for their superstructure. It is a fearsome instance of the incongruity of the two styles, which merged here quite easily because Tours was one of the earliest cities where the Renaissance obtained a strong foothold. If one eliminates this objectionable upper part, the rest of the façade seems symmetrical and fairly simple, as appears from the view of the portals in Fig. 136. An interesting peculiarity is the polygonal form and decoration of the four buttresses. It was a peculiarity of this style to give this wedge-shaped outline to the buttresses of the west front and to cover them with rich ornament. Perhaps the richest is the façade of Rouen cathedral, where it is an obtrusive element.



138—Choir of Mont St. Michel. (From Enlart.)

At Saint Wulfran d'Abbeville the design of the three portals is one of the best. The panel arcading above them is simple and the interest remains centred in the portals themselves, whose gables are of unusual delicacy. This church illustrates the use of the triforium, which was rare at this time except in Normandy, where it persisted as an archaistic survival. At Abbeville, where it is a dark gallery in the old fashion anterior to 1250, the broad coarse tracery is finely planned. There is also a blind triforium at Argentan (Saint Martin).



139—Nave of St. Nicolas-de-Port. (From Michel.)

In Saint Pierre at Caen the triforium is also retained, but without tracery, its openings being covered by the low flat basket-handle arch. A view of the interior is given in Fig. 137, as it is happier than most of the flamboyant interiors, perhaps because it retains so many archaicisms. In its vaults we see the pendant keystones, not so common in France as in England. The choir of this church is interesting as exhibiting a juxtaposition of late Gothic and early Renaissance forms in harmony. A figure under French Renaissance gives the chapels in the foreground and they retain enough of the general outlines of late Gothic work to avoid a clash of styles.

It is interesting to compare with this choir that of the abbey church of Mont Saint Michel (Fig. 138) with the terraced roofs of its chapels and a Flemish heaviness. It is extraordinary to note how few are the flamboyant traits in this design and how simple it is notwithstanding the richness of its effect.

Martin Chambiges is the name that occurs most frequently as the architect of important works of this age. In Paris his style can be judged by the famous Tour St. Jacques, at Sens by the two transepts, at Beauvais by the north transept, at Troyes and Pontoise by the façades respectively of the Cathedral and St. Maclou.

Quite a different type of interior is illustrated (Fig. 139) in Saint Nicolas-de-Port. It has several unusual features. The entire effect is one of great lightness and luminosity, with the advantages of the hall-church scheme. The disuse of the triforium is utilised to raise the aisles. The southern peculiarity of the elongated column is emphasised by the continuation of its outline in the form of a broad shaft out of which emerge the vaulting ribs, which are of the type with liernes and tiercerons. The same principle governs the evolution of the ribs of the aisle vaulting. The transept is divided into two equal aisles by a high central shaft which gives to this part something of the aspect of the two-aisled churches we have noted in describing the Jacobins at Toulouse on p. 102. The lofty lancets in the choir are an English feature. Altogether this is among the most successful of flamboyant interiors and one which justifies the assertion that this style made a last advance in formulating Gothic ideas of space.

This church of Saint Nicolas, the chapel of Brou and others were works of the early part of the sixteenth century and bring us to about the year 1530 with hardly a sign of the invasion of Renaissance, which began to affect civil before it did religious architecture.

CHAPTER V

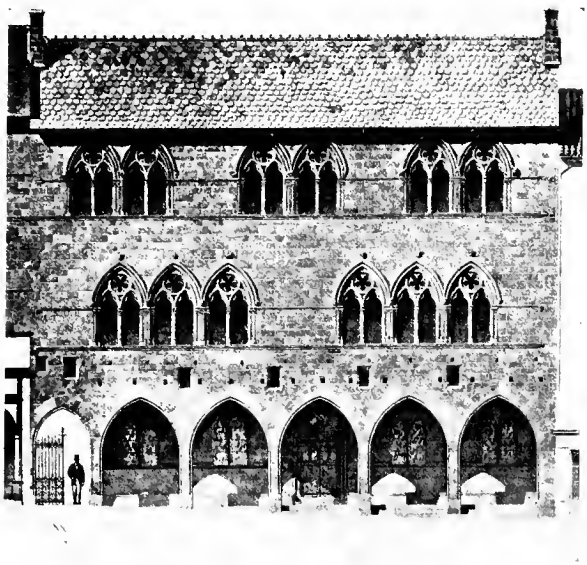
CIVIL, MILITARY AND MONASTIC GOTHIC IN FRANCE

THE churches belonging to the monasteries have been already described whenever they were of sufficient importance: St. Denis, St. Germer, St. Ouen at Rouen, etc. Architectural style and history were created by church architecture. Yet, to the modern student, and especially to the architect who is in search of suggestive and artistic models, there is more material for study outside of church architecture. Few cathedrals are now being built. This is not the age of religious architecture. Halls, houses, castles, villas, palaces, municipal buildings, cloisters, chapels, refectories; even corridors, staircases, kitchens, gateways, fountains, etc., were all treated with originality by Gothic architects and with a plasticity and a charming asymmetry in striking contrast to the rigid canons that were ushered in by the Renaissance in Italy.

Town-Halls.—If France is not rich in municipal buildings and guild-halls such as we find in Flanders, Germany and especially in Italy, it was due to different political conditions which prevented the development of civic autonomy. There were, of course, buildings appropriate to whatever public business was transacted. There were separate towers or belfries, the orthodox symbol of communal authority, and in the base of which the town prison was often situated. At other times the belfry was connected with the Hotel de Ville, which contained the meeting halls and the administrative offices of the municipality. This communal house consisted usually of two stories: a basement, often with an open porch or even consisting entirely of an open arcaded public market, supported by columns or piers. On the second story were the meeting rooms; the hall of the *Echevins*, the hall of justice, the hall for meetings and the chapel. The few buildings of this class in France that are of any architectural importance are:

the Hotel de Ville at Compiègne, that at St. Quentin, and the Palais de Justice at Rouen. They all belong to the latest period of Gothic, and are charming examples of flamboyant. It will be noticed that they are all in the north, where municipal life was always far more vigorous than in the south.

The modest dimensions and simple style of the town-halls of the thirteenth and fourteenth centuries are shown in the façade of that at Cordes in Fig. 140, with clear simple lines, and a charming asymmetric grouping of arcades and windows that saves it from formalism. As a

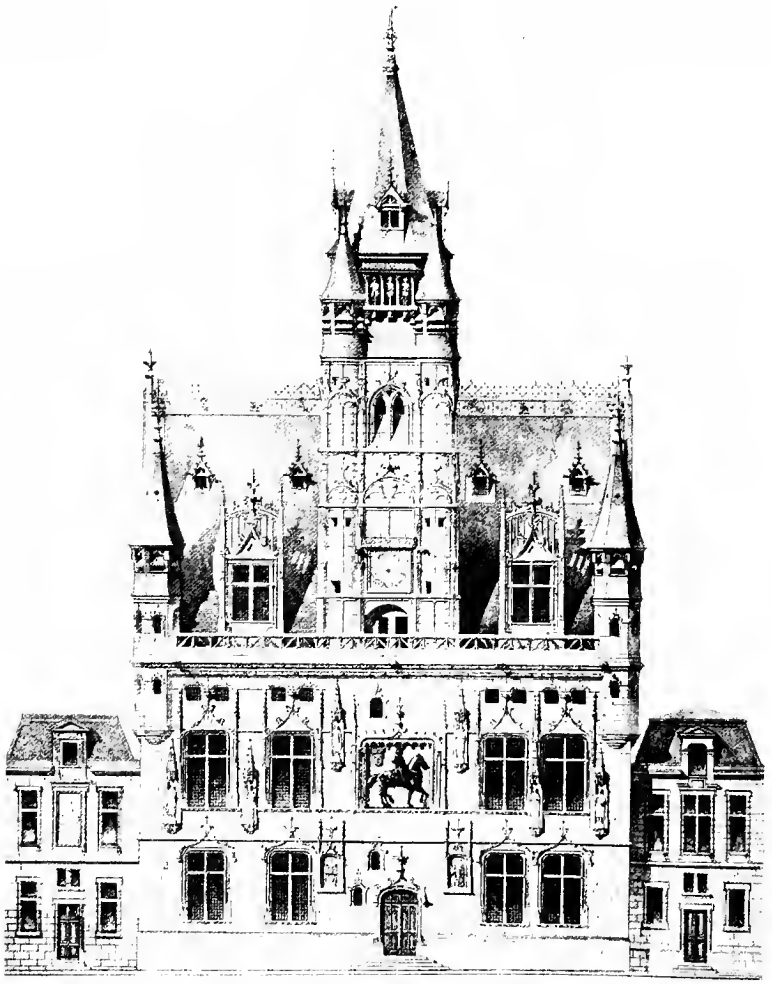


140—Hotel de Ville at Cordes. (From *Monum. Hist.*)

type it stands midway between the town-halls with solid lower floor and those with open arcades.

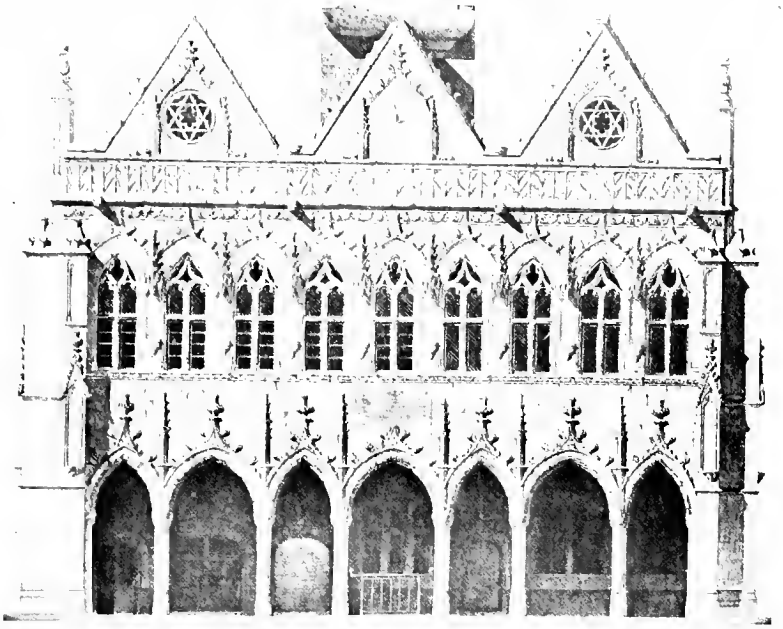
At Compiègne (Oise), the Hotel de Ville (Fig. 141) was built between 1505 and 1511. Its architect was Pierre Navyer. The wings, in Renaissance style, are a later addition. The design is charming, mainly through the grouping of the central belfry and the corner turrets. Otherwise the scheme does not differ materially from the façade of a private house, because the architect did not follow the scheme of the open basement which had usually prevailed. The solid central section under the belfry is very happily treated, and within the belfry is used as the stairway.

Far more florid is the Hotel de Ville at St. Quentin (Fig. 142) which represents the other type of façade; the type with open porch and without structural belfry. What it gains in richness of openings



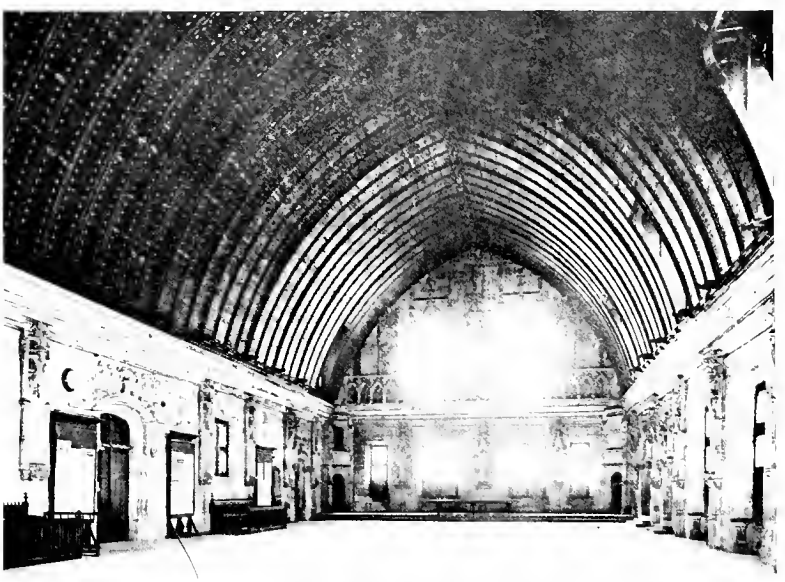
141—Hotel de Ville at Compiègne. (From *Monum. Hist.*)

it loses in effectiveness of composition. There is a belfry, to be sure, set back of the central gable, but it is later in design and built of wood, as many belfries were. It is also interesting to note the contrast in



142—Hotel de Ville at St. Quentin. (From *Monum. Hist.*)

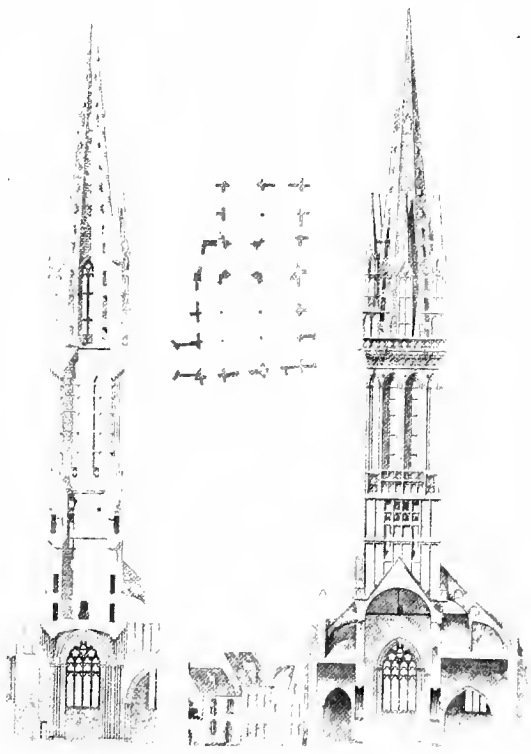
the arcades of these two structures: at Compiègne the basket-handle arch with cross mullions and at St. Quentin the pointed arch. In both cases we have the reverse curve arch in "accolade" and at St. Quentin



143—Council-room of Palais de Justice, Rouen. (From Gurlitt.)

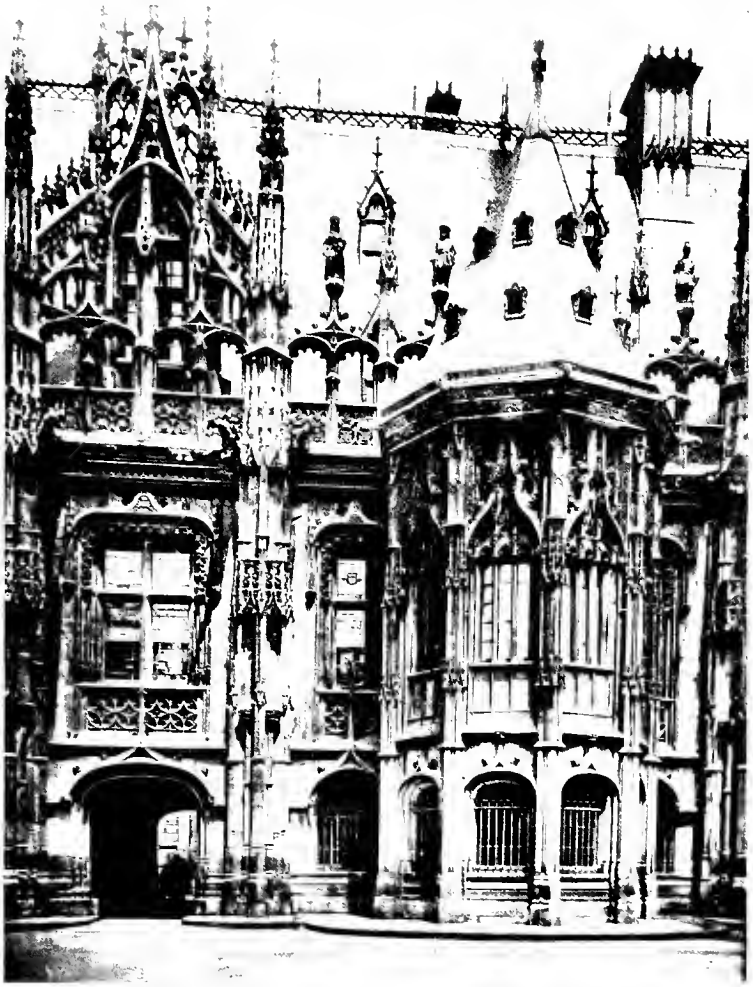
the cusped round arch in the tracery, so common in late flamboyant. The alternation of broad and pointed arches in the basement is the secret of the charm of this façade.

The most magnificent Gothic municipal building in France is certainly the Palais de Justice at Rouen; splendid in its extent, in the beauty of its design and the perfection of its detail. It was built as the Court of Exchequer of Normandy during the latter part of the fifteenth century, being completed in 1506. The architects were Richard and Roger Ango and the most interesting documents give us every detail of the methods used in its construction, the scaffolding, the workmen, the materials. It is built around a very large court—so wide as to give plenty of perspective for the inner façades. At one end is the great communal hall, dating from 1493, with a splendid interior reminding of the Sala della Ragione, the communal hall at Padua, with its impressive and well-proportioned jointed wooden ceiling rising from a massive cornice. We must replace the statues in their niches in order to obtain the full effect (Fig. 143). The traceried balcony is more effective than the plate can show, obscured as it is here by the front lights. There is another large hall, in the main building (*La Grande Chambre*), with its original carved ceiling. But, the great beauty of the building is in its exterior. A large part is comparatively simple, except for the gorgeous dormer windows, with their elaborate



143*a*—Belfry and Chapel of Notre Dame du Kreisker at St. Pol de Leon. (From *Monum. Hist.*)

tracery joining the high gables and the corner pinnacles. The greatest richness centres on the façade with the chapel, part of which appears in Fig. 144. Here the chapel, which stands in the middle, is shown, projecting as a polygon, and the windows adjoining it, instead of being architraved, have the basket-handle form with cusped archivolt and

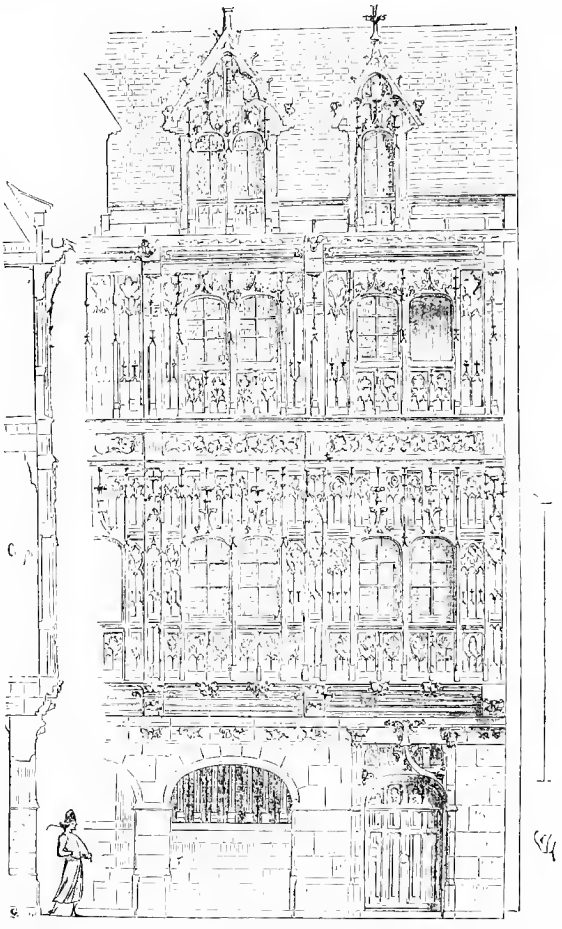


144—Part of Court of Palais de Justice, Rouen. (From photo.)

richly decorated base. The roof balustrade which elsewhere is interrupted only by the buttresses has an arcaded superstructure, and the buttress piers are built higher for decorative effect and connected with the dormers by flying buttresses of excessive richness. This part of the design is somewhat confused and one is inclined to criticise the statues surmounting the finials of the balustrade arches. One of the best

features of the composition is the arrangement of the *perrons* or stairways of approach to the large halls on the second or main floor, which are reached not from the interiors but directly from the outside. One is to the right of the chapel and another in the left-hand façade.

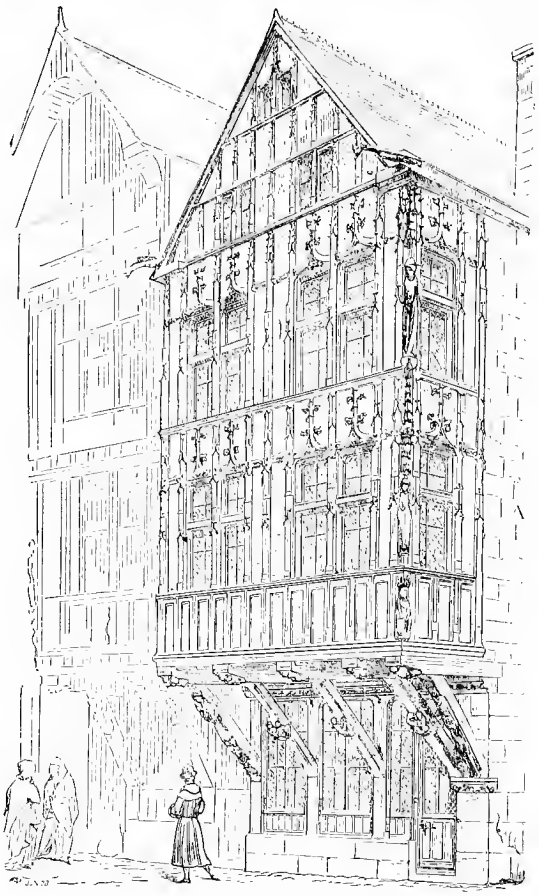
Another and even rarer type of civic building was the town belfry as a separate structure or connected with a small building at or around its base. This also was in the north, and the most charming design is that of St. Pol de Leon where the belfry is connected with a chapel (Fig. 143a).



145—Frame house, panelled, on stone basement, at Rouen. (From Viollet-le-Duc.)

Private Dwellings.—During the later period especially, when France began to recover her prosperity during the fifteenth century, artistic wood construction became fashionable. This was probably due to foreign influence. Germany, Flanders and England had always used

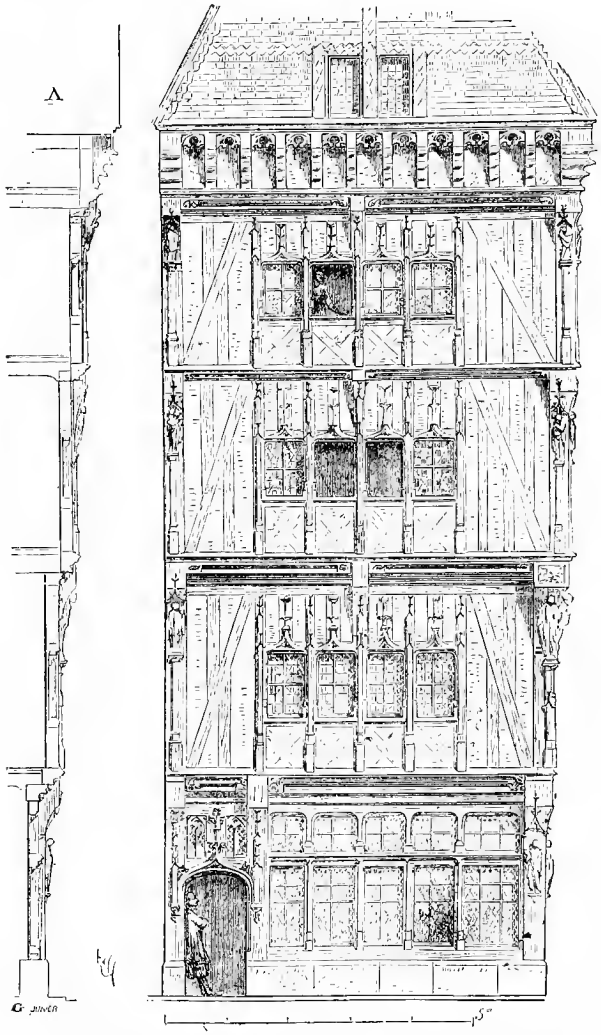
wood more freely than stone in private architecture. The rise in land values led at the same time to a gradual increase in height. There are in France houses of the fifteenth century to which French taste has



140—House at Reims. (From Viollet-le-Duc.)

given a greater symmetry and charm of detail than we find in other countries. This will appear in such a design as that of a house at Rouen (Fig. 145), where the entire front above the stone basement is composed of carved wood panelling of charming flamboyant work. Such elaboration was, of course, exceptional. Two structural peculiarities gave picturesqueness. One was the projection of the entire superstructure above the basement on corbels formed by heavy diagonals. This was relatively rare, and is illustrated in a house at Reims on the Place des Marchés which is also remarkable for the excessive development of the glazed surface, which characterises this period of the fifteenth century (Fig. 146).

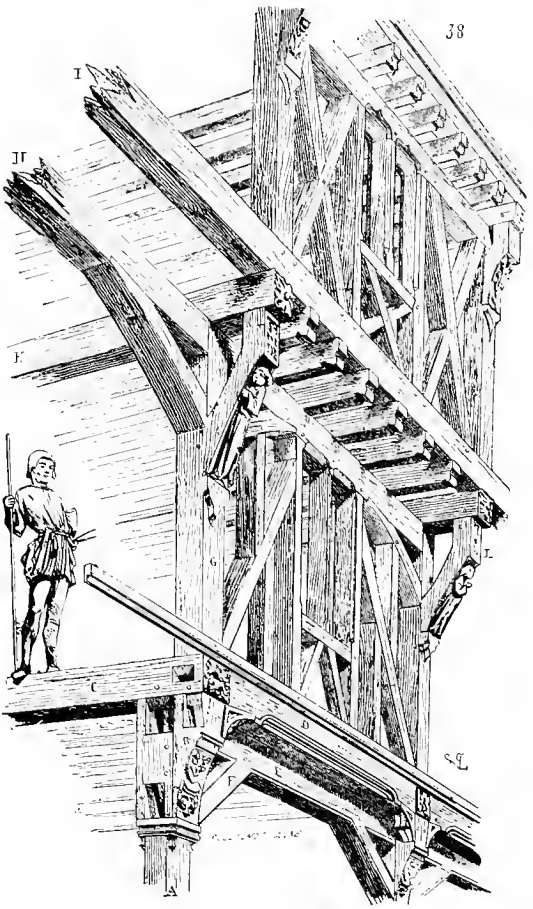
Here the body of the structure is of stone and the wooden façade can be put together so as to admit of this development. Far more common was the graduated corbelling out of each story, in the way shown in Fig. 147 in a house at Rouen which is interesting to com-



147—Half-timbered house at Rouen. (From Viollet-le-Duc.)

pare with the previous one because it shows an early and more structural stage. The type can be carried back nearly two centuries and it is illuminating to examine in Fig. 148 the skeleton of a house of the thirteenth century in Châteaudun, as it is analysed by Viollet-le-Duc.

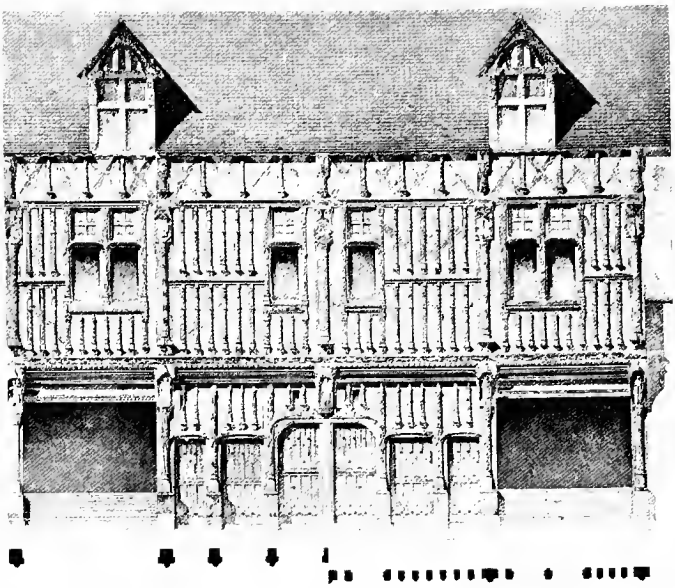
Here we have the common type of such houses before one or two stories were added to the normal height in the fifteenth century. In a part of France there was a rich and peculiar marking of the structural features by lines of pilaster-strips or semi-columns, resting on brackets and sometimes dividing each story into two or more sections. An irregular



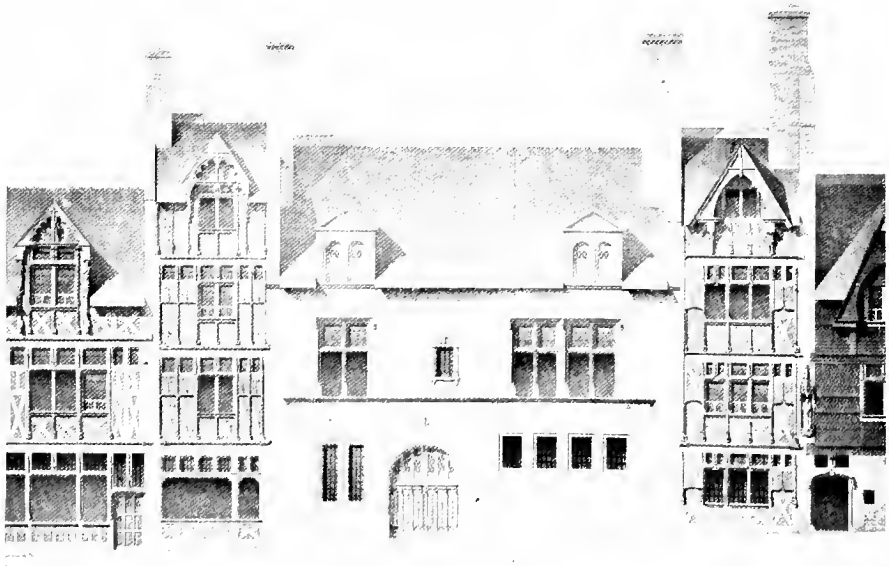
148—Timber ossature of a French house of the thirteenth century.
(From Viollet-le-Duc.)

and charming use of this design appears in the house of the flamboyant style at Gallardon (Eure-et-Loir), where the carving shows Renaissance influence (Fig. 149).

It is interesting to study the group of houses from a street at Orleans in Fig. 150 with its juxtaposition of half-timbered and stone houses. The city of Orleans is full of interesting mediæval and



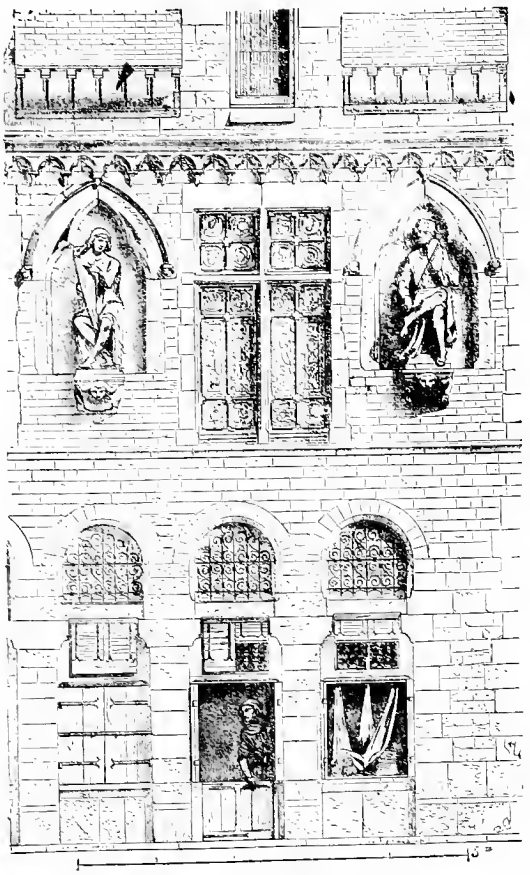
140—Half-timbered house at Gallardon. (From *Monum. Hist.*)



150—Group of houses at Orleans. (From *Monum. Hist.*)

Renaissance houses, rivalling Rouen, central *versus* northern France, in its style.

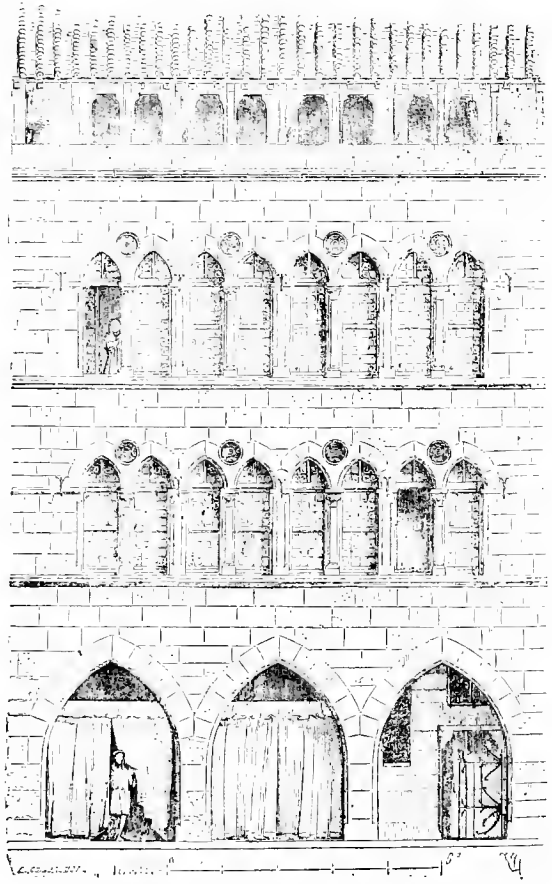
Among stone houses of rather unusual interest as dwellings midway between the ordinary bourgeois house and the seigneurial dwelling, the most interesting early instance is at Saint Antonin: this house was, in the fourteenth century, transformed into a municipal building.



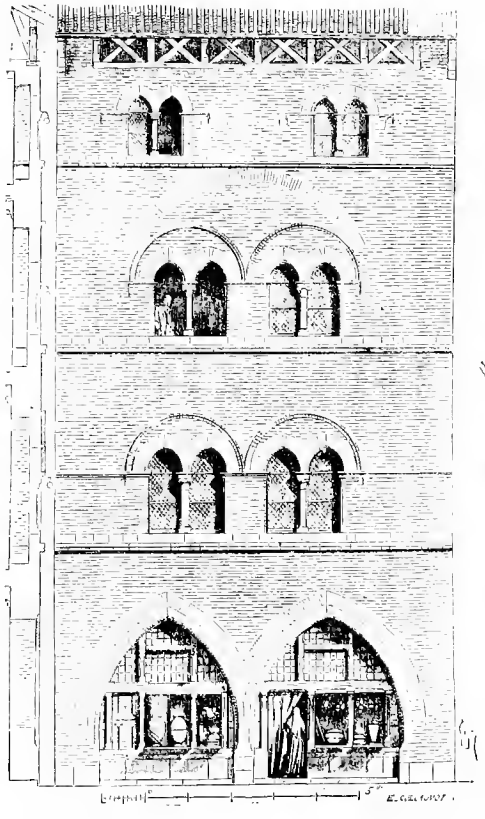
151—Detail of house of the musicians at Reims.
(From Viollet-le-Duc.)

Its architraved gallery is full of character. Evidently it is a work of transitional art, shortly before 1200.

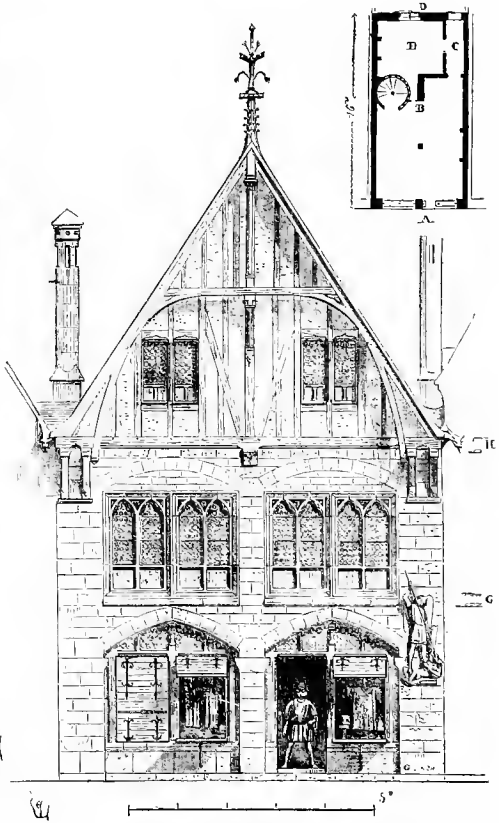
Somewhat later is the house of the musicians at Reims of pure thirteenth century stonework, of which only the central section is given in Fig. 151 with the statues of the musicians. In the south of France at this time brick was quite popular in place of stone, as it



152—House at St. Antonin. (From Viollet-le-Duc.)



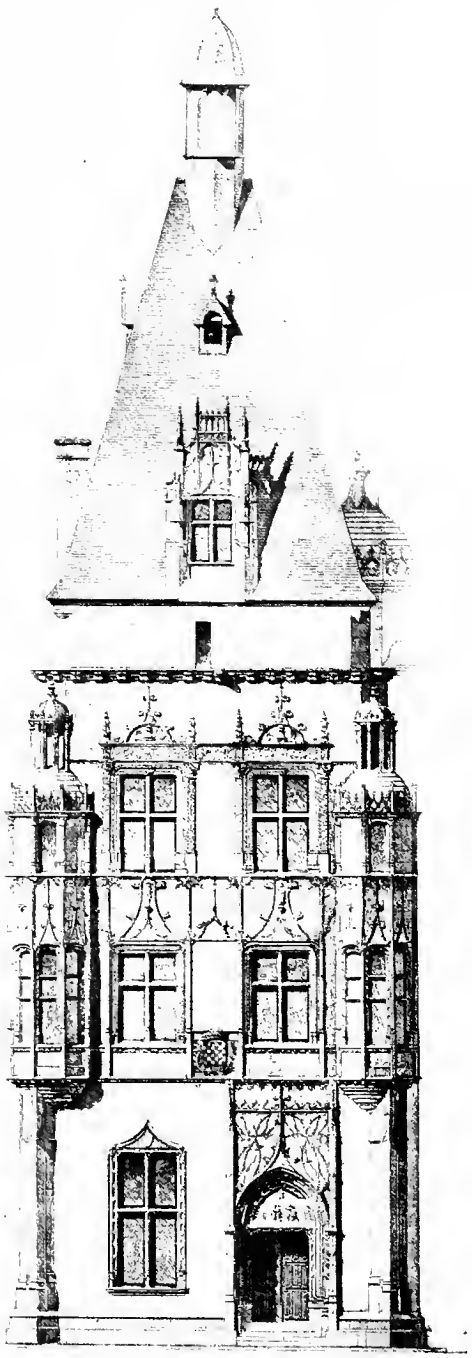
153—Brick house at Caussade. (From Viollet-le-Duc.)



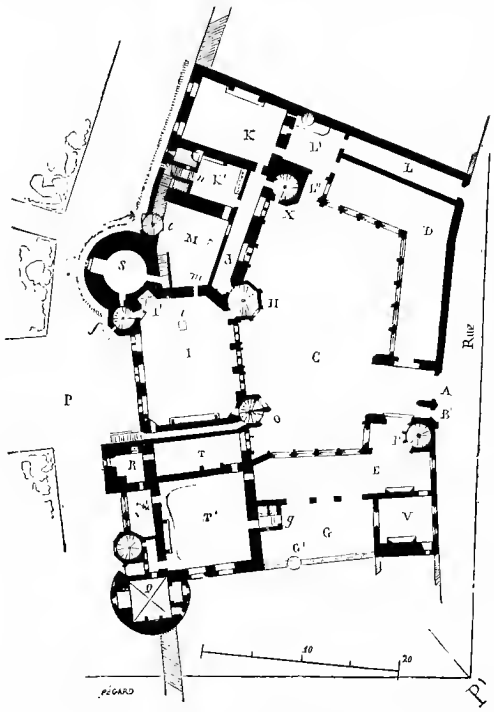
154—Stone house with half-timbered gable at Chateaudun. (From Viollet-le-Duc.)

was in church architecture and the difference that the material made in the treatment is illustrated in two contemporary houses, one in stone at St. Antonin (Fig. 152) and the other in brick at Caussade (Fig. 153). It is in these houses of the thirteenth and early fourteenth centuries in stone or brick that what is characteristically French can best be studied. The houses of the class first described, either wholly or in part half-timbered, belong to a broad category differing only slightly from what we shall find in Belgium, Holland, Germany, and even England. Two other charming examples illustrate different methods of treatment: a house of the middle period of Châteaudun (Fig. 154) with very pointed half-timbered gable; and a later house at Dreux (Fig. 155)—afterward turned into a Hotel-de-Ville, which has a modest admixture of Renaissance ornament with its flamboyant.

Of city houses on a larger scale there are three that represent the renewal of prosperity in the fifteenth century. The first of these is the house of Jacques Cœur at Bourges. This bourgeois millionaire wished to rival the greatest



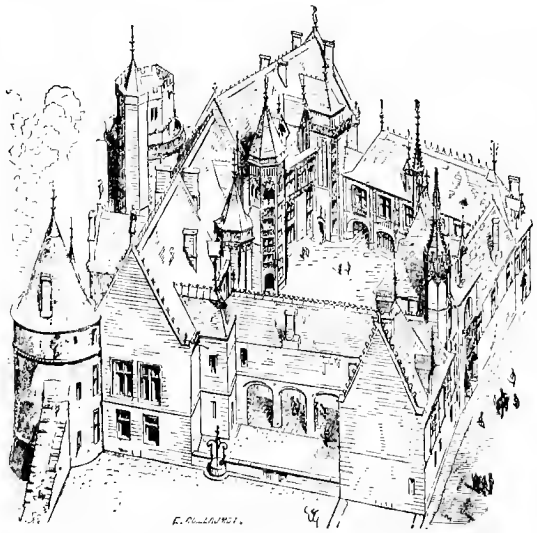
155—Hotel de Ville at Dreux. (From *Monum. Hist.*)



156—Plan of house of Jacques Cœur at Bourges. (From Viollet-le-Duc.)

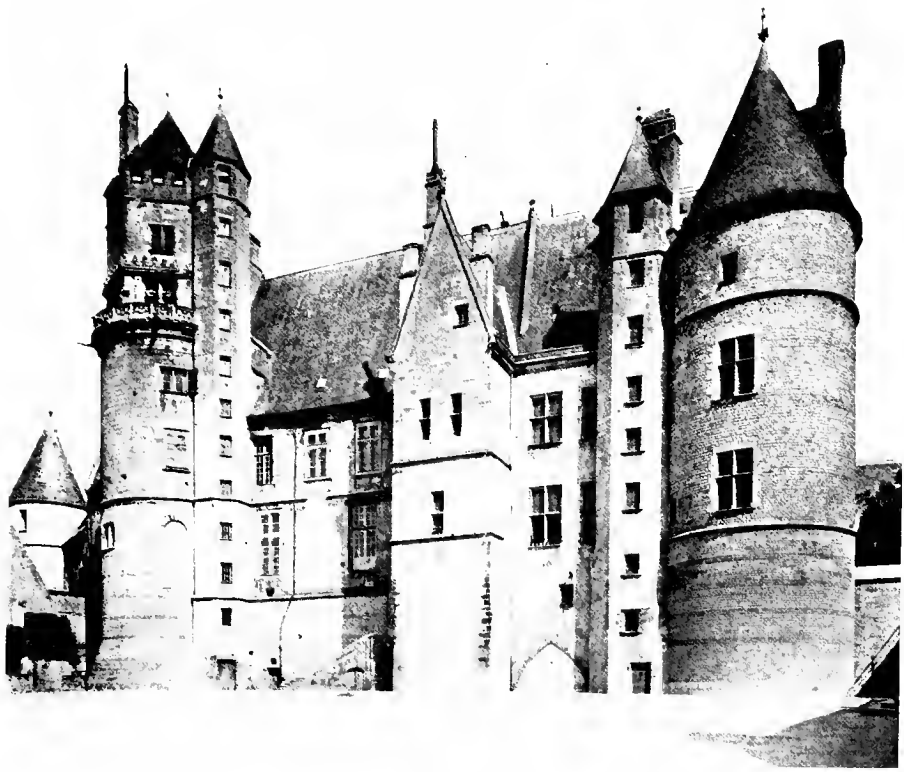
feudal nobles and built this palace in the city as an adaptation of the fortified château in the country.

The plan in Fig. 156 and the birds-eye view in Fig. 157 illustrate the resemblance to the military type. The house faces on the street to the right, and on the extreme left the corner tower joins the city wall. The charming irregularity of plan is partly caused by the situation between the city wall and the street and by Jacques Cœur's decision to utilise the old Gallo-Roman city towers as the corners of his mansion. But it is also characteristic of mediæval builders, in contrast to those of the Renaissance, to welcome and emphasize natural irregularities, for their picturesque possibilities. This mansion must be described in some detail. From the central body two wings project on either side of a court toward a street façade with a central pavillon 45 metres (148 ft.) long. The rear façade along the ramparts, given in Fig. 158, shows how the Gallo-Roman towers of brick and rubble were



157—Bird's-eye view of house of Jacques Cœur at Bourges. (From Viollet-le-Duc.)

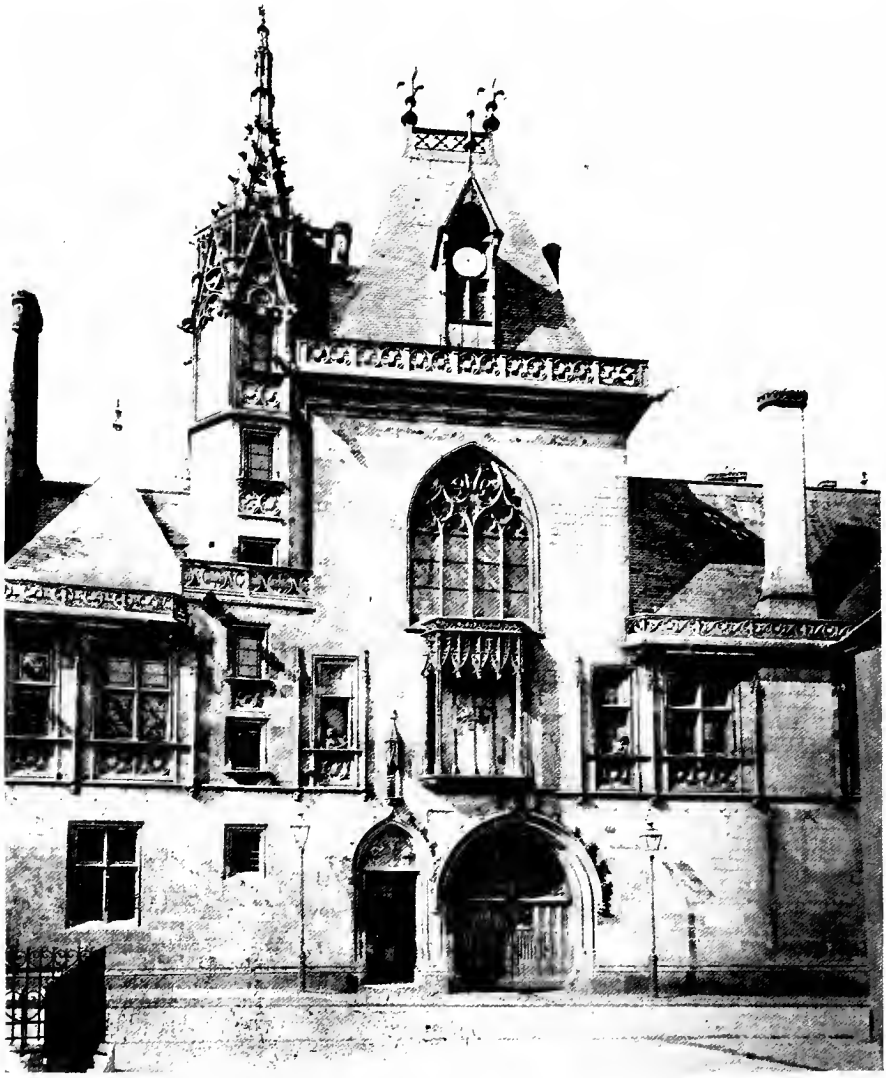
used to give a feudal castellated air; that on the left being continued in the stone masonry of the new work, with rich pavillon and balcony. A polygonal turret-tower with spiral staircase was annexed to each of these antique towers and the old bastion between them served admirably to break the line toward the centre with a highly gabled projection. Though the plainest, this was the loftiest side, having originally at its base the wide city moat.



158—House of Jacques Cœur: rampart façade. (From photo.)

The entrance on the street (Fig. 159) is one of the most delightful of civil flamboyant compositions, with its perfectly poised asymmetry, a porte-cochère and postern, a staircase-turret flanking the tower-like centre with its splendid window, leading to the chapel which formed a large hall over the entrance. The plan of the lower floor in Fig. 156 will explain the arrangement around the court, of which the arcades of the right side are interesting to compare with those of

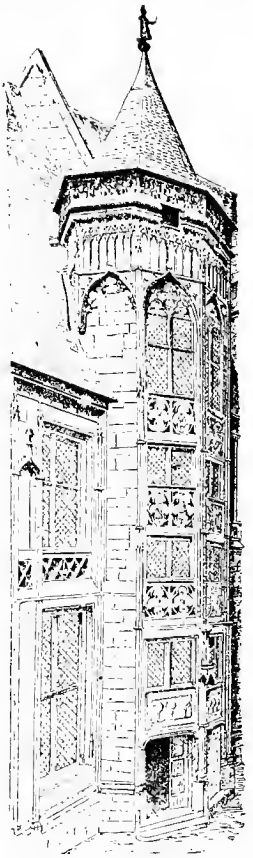
the Hotel de Cluny in Fig. 162. Nearly the whole of three sides consists of closed porticoes of basket-handle arcades. That on the right (D on plan) was where the poor of the town gathered to be fed and receive



159—House of Jacques Cœur: street façade. (From photo.)

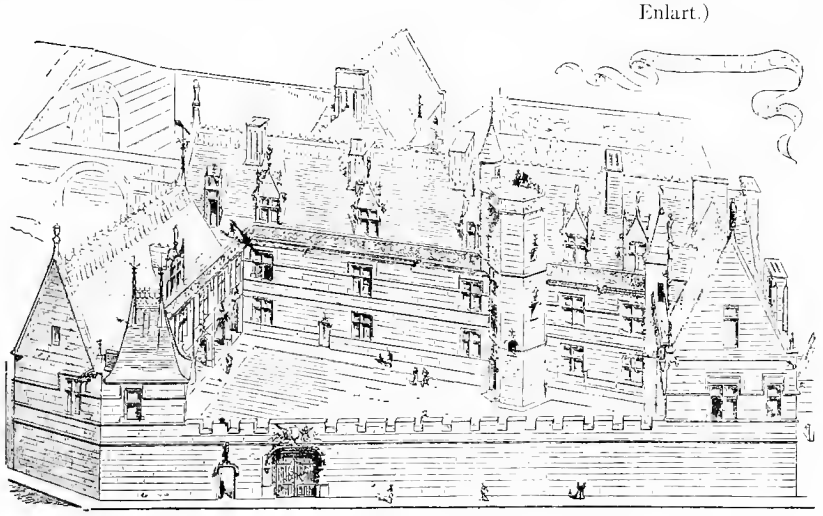
alms. Beyond it, in the corner next to the staircase X, is the entrance to the kitchens through a small court with a well. Between the large dining hall in I and the smaller kitchen is the buttery, M. In connec-

tion with this hall is the main staircase, H, which leads to the principal or general hall on the floor above. The view of it in Fig. 160 shows a window of the dining hall and of the reception hall above; this is the central part of the court from the decorative point of view. It is characteristic that, beside the two stairs already noted in connection with the old towers, there are seven staircases, all but one of them spiral. This multiplication of stairs in mediæval mansions was in harmony with the practical sense shown in every detail of the internal arrangements. The scheme of a single, monumental, central stairway, which has become so integral an element of modern architecture, was part of the apparatus of the Renaissance, which sacrificed comfort and sense of ultra-symmetry and centralization.



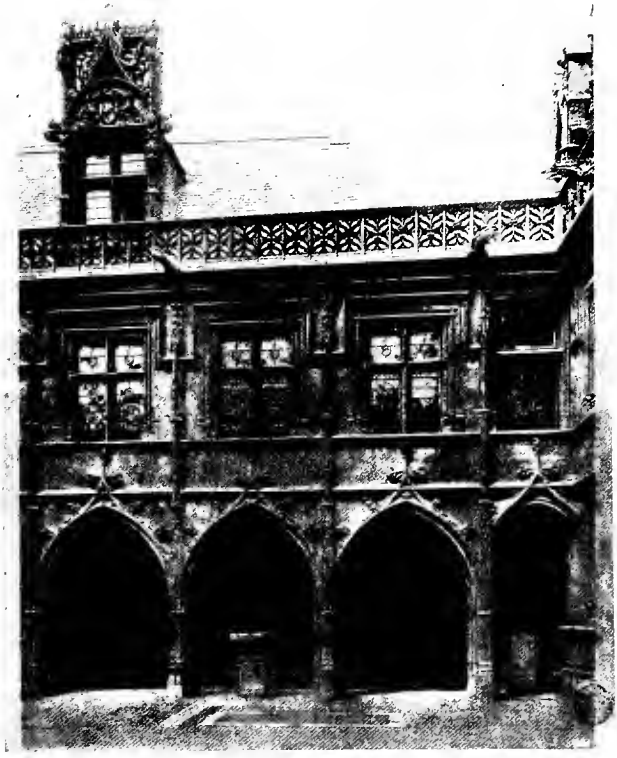
160—Staircase of house of Jacques Cœur. (From Enlart.)

If the mansion of Jacques Cœur illustrates the restrained style current in part of Central France, the Hotel de Cluny illustrates a slightly richer side of late Gothic work. It also was a private residence, and is familiar to many who visit Paris as the Musée de Cluny. Fig. 161 shows how it was built irregularly around a court, or



161—Bird's-eye view of Hotel de Cluny, Paris. (From Viollet-le-Duc.)

rather a small garden fronting on a side street. The detail of the arcade on the short side in Fig. 162 is richer than that of Jacques Cœur in the greater quality of the old-fashioned pointed arches, in the decorative value of the hood arches on the second floor, and the



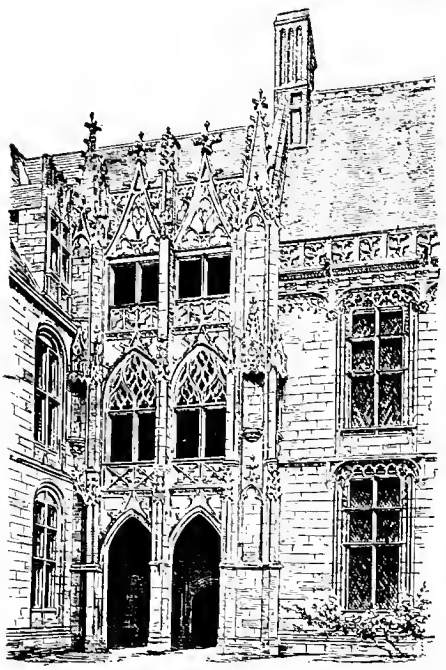
162—Arcades in Court of Hotel de Cluny, Paris. (From photo.)

gradual working up of an ascending decorative climax culminating in the over-rich dormer with its sculptural coat of arms and festoon-holding angels.

The development of this style into the richer flamboyant forms is charmingly expressed by the Chateau of Josselin, in the Morbihan, at the close of the XV century, before any of the inroads of Renaissance forms. There is a splendid long façade at this chateau of which the view in Fig. 163 gives only a small part at the extreme right. It is sufficient to show what free variety the architect has given in the

placing of windows and their size, in setting the middle story windows partly in the dormers, in turning the usually rather insignificant roof balustrade into the most prominent decorative motif, with a variety of design which is still further varied along the rest of the front to the left. Note also the flying buttress connecting the pinnacles with the gable of the dormers, in similar fashion to the palace at Rouen. Such work as this and as that of the Chateau of Châteaudun places late French Gothic civil buildings on a distinctly more artistic level than the similar work of their greatest rivals in England, where there is comparatively little attempt at anything in the way of decorative detail.

163—Chateau of Josselin. (From photo.)



164—Staircase and part of Court of Chateau of Châteaudun. (From Enlart.)

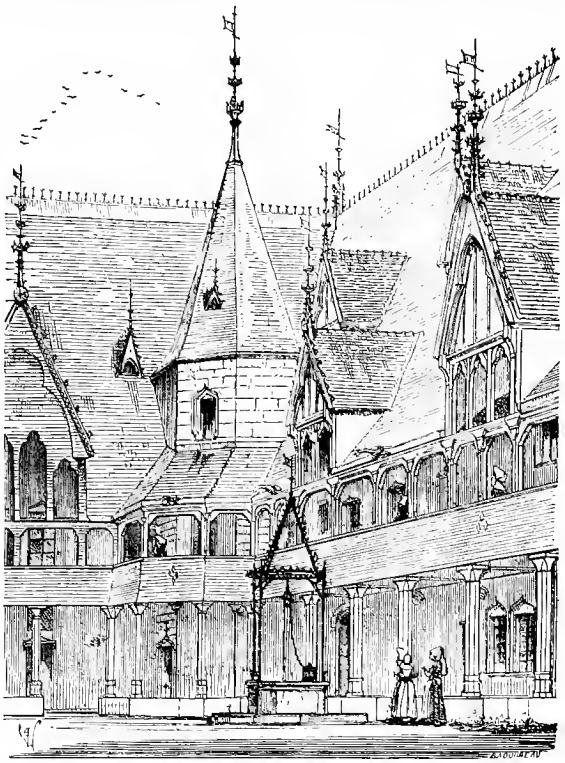
Quite another type is the famous staircase of Dunois at the Castle of Châteaudun (Fig. 164), where instead of a projecting tower, as at the house of Jacques Cœur and in most cases, it stands in a recessed storied gallery, with niches on the way up for seats and lanterns. This chateau is, besides, one of the most exquisite of the rich Flamboyant manors, so that it is worth while not only to study the three stories that contain the

165—Newel-post and vaulting in Hotel of Jean-sans-Peur at Paris. (From Enlart.)

166—Doorway of Chapel of St. Hubert at Chateau of Amboise. (From photo.)

stairway cage, with its perfect adaptation of church tracery and gables, but also the whole left wing of which the chapel is in the centre: a highly dramatic composition centering about a four-storied pavillon with basket-handle arches, almost concealed by a lacework in stone. The details are handled with great delicacy. Particularly interesting is the introduction of the classic cornice in an otherwise pure Gothic design.

As a fantastic piece of personal design, before leaving the subject of staircases, we will give the newel-post and vaulting of the stairway of the Hotel de Bourgogne in Paris (Fig. 165), built for Jean-sans-Peur early in the XV century. It is one of the few examples in France of that transmutation of Gothic constructive forms into purely naturalistic vegetable forms which became so popular in Germany and Spain, but which French art had too much taste to use except sparingly. This particular instance is dangerously charming.



167—Court of the hospital at Beaune. (From Viollet-le-Duc.)

Sometimes, though not often, there was figured sculpture in these civil mansions, especially after the middle of the fourteenth century. There was some in the house of Jacques Cœur, and a beautiful piece of very late work is the doorway of the Chapel of St. Hubert at the Chateau of Amboise in Fig. 166.

There are few cases, also, of construction in wood on a large scale, in compositions similar to the courtyards of the princely houses we have been studying. The most important of these is the court of the hospital of Beaune in Burgundy (Fig. 167), which we can also compare, in a

way, to the court of the palace at Rouen. Its two-storied design is most effective, surmounted by large gables, so that one hardly notices the necessary absence of detail and ornament. It is also a very rare example of a mediæval hospital in use in modern times.

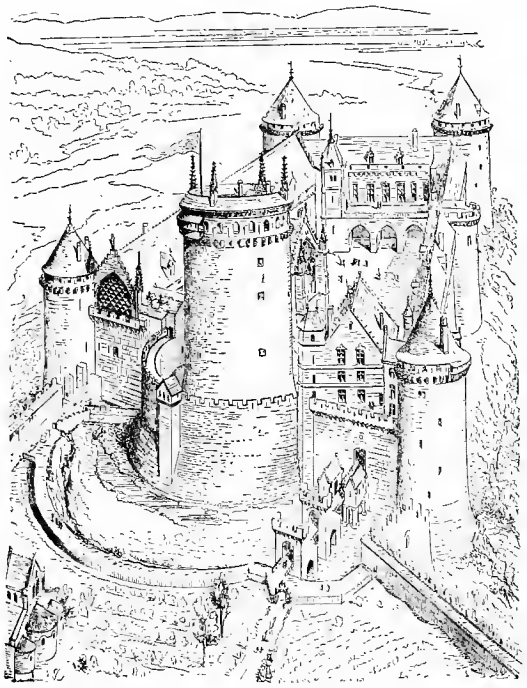
Military Architecture.—As this is a history of architecture as an art, and not a study of works of engineering or of mere construction, there are certain classes of buildings that must be excluded. Among these are the majority of the products of military architecture; those in which the exigencies of the art of defense and offense have either eliminated the art of architecture or reduced it to a negligible quantity. Thus Roman camps, Gallic fortifications, Crusading fortresses have not been described. But there came a time in the Gothic age when feudalism still ruled but had put on a mantle of magnificence and culture previously unknown, the age when troubadours and Courts of Beauty and gorgeous tourneys were but part of the pomp of life. Castles became splendid and luxurious abodes instead of mere fortresses. Their inner courts, chapels, halls, were gems of architecture and decoration. Only the exterior portions, exposed to assault, remained grim and simple. The change begins to affect architecture in the age of St. Louis. It spreads over Europe during the course of the XIII century. The result is interesting and well worth studying. In the first place there are certain scenic conditions of great importance. The site must be strong and almost always high and precipitous. This gives a picturesque, irregular and commanding situation. To such conditions the mediæval styles were peculiarly adapted. Both classic and Renaissance architecture disliked the picturesque and irregular and could not adapt themselves to it. They sought rather to bend nature. Gothic art combined common-sense and adaptability to material facts with imagination and inventiveness. Hence a brilliant and varied development of military architecture merging in the XV century into the non-military palatial type called for by political and social transformations.

The mass of material makes it necessary to select only a few examples from each country. There are three main types: (1) the independent Castle connected at times with a dependent town; (2) the Fortress-Palace connected with a city; (3) the City House that is part of the city plan.

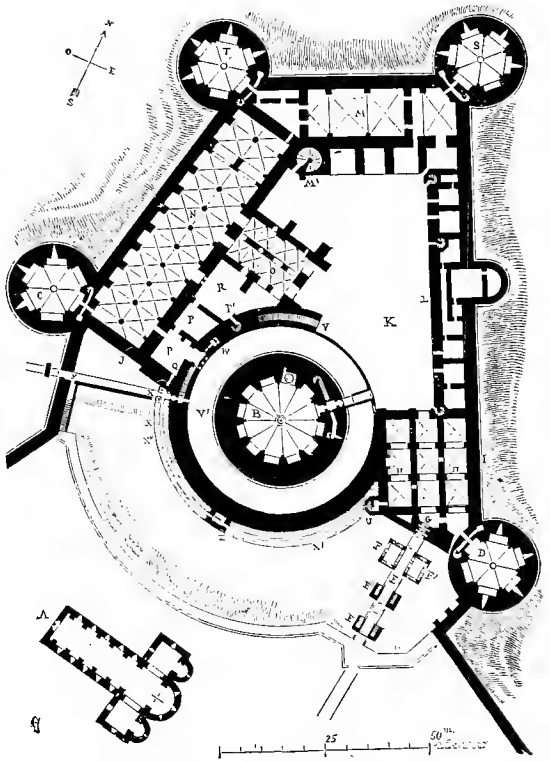
It is an interesting fact that the Orient had always been far in advance of the rest of the world in military architecture, from the time

of the ancient Hittites to the Byzantine Empire and the Arabs. The Crusaders learned from the Oriental fortresses the real science of fortification. Those great military orders of the Knights Templars and Knights of St. John (Hospitalliers) built in Syria enormous castles which were never equalled in Europe. The two most important castles were the inland one called the "Krak" and the seaboard fortress of Tortosa. Both of these are works of the close of the XII and first half of the XIII century. To realise their size it is only necessary to say that the "Krak" was habitually garrisoned by 2,000 men-at-arms and was capable of receiving about 20,000 persons. Both of these castles are distinctly European, of transitional and early Gothic style, and built apparently by French architects. The great Halls where the Knights held their meetings were evidently derived from the chapter-houses of the monasteries or the halls attached to cathedrals. That at the "Krak" is 25 m. long and 7 m. wide, divided into three bays with cross-vaults, and along one of its long sides is a covered and vaulted porch of six bays, of exactly the same design as an Early Gothic cloister of c. 1225-50. The Hall at Tortosa is even more imposing. Its length of 44 metres is divided by columns into two aisles of six bays. These two great semi-monastic orders, with their new requirements, transformed the character of the art. France, England and Germany followed their example; but it was on a smaller scale because nowhere were there such enormous bodies of men to be provided for. England, perhaps, approached the more closely, because the scheme of King Edward I provided for a network of fortresses to be garrisoned on a large scale for the protection of the kingdom, whereas in France and Germany the castles were usually private enterprises of feudal lords.

The Chateau of Coucy in France is the first to show the new art. It was distinctly a private enterprise, yet the lords of Coucy were of the first rank. The castle has been carefully restored. A bird's-eye view is given in Fig. 108 from the incomparable Viollet-le-Duc, and it can be elucidated from the plan in Fig. 169. The key to the defense is, of course, the Keep or *donjon*. The circular plan of Oriental origin has here replaced the Norman rectangle. The new forms of Gothic vaulting have been utilized to turn the three stories of its interior into grandiose halls with ingenious and striking vaulting surfaces, quite different from any used in church building (Fig. 170). The upper hall was the general gathering-place for the garrison and, with its balcony, could hold about 1,200 men (Fig. 171). Its outside

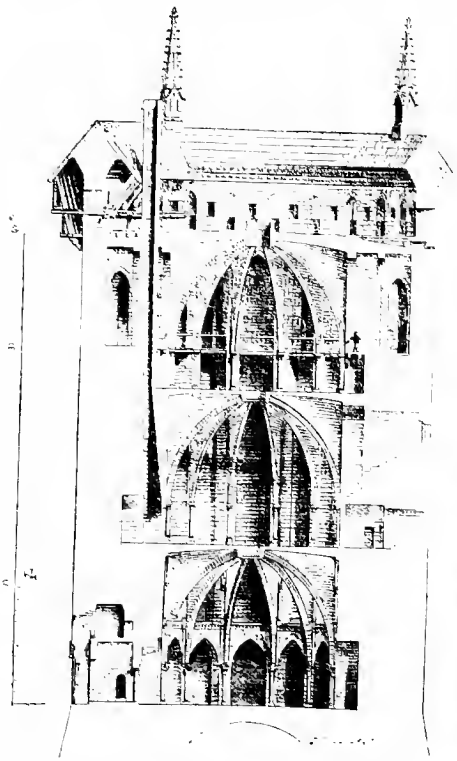


168—Bird's-eye view of Chateau of Coucy. (From Viollet-le-Duc.)

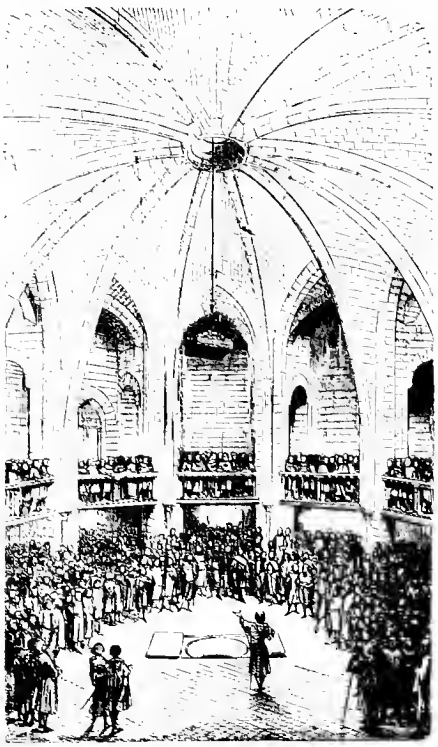


169—Plan of Chateau of Coucy. (From Viollet-le-Duc.)

diameter was about 100 ft. and the height of the keep about 200 ft. The buildings facing on the court were mostly remodelled c. 1400. The most interesting is the chapel which projects into the court from the main hall called the Salle des Preux, from the statues of nine warriors. It was about 60 m. long, and covered with a wooden waggon roof. Another smaller hall was called the Salle des Preuses from its statues of women. It was preceded by an arched portico. A



170—Section of donjon of Chateau of Coucy. (From Viollet-le-Duc.)

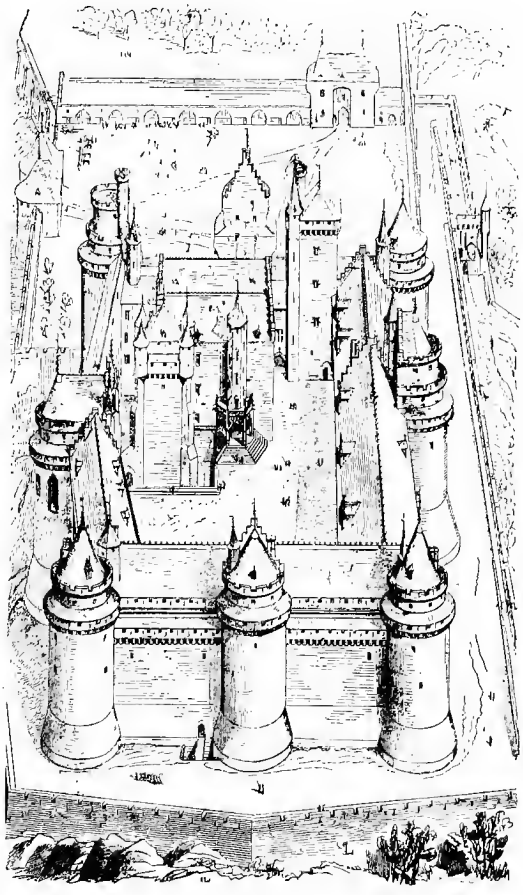


171—Interior of main hall of donjon at Coucy. (From Viollet-le-Duc.)

view of it is given at the further end of Fig. 178. It must not be imagined that the castle had been preserved in the form given in Viollet-le-Duc's illustrations which are here reproduced; even of the keep itself the upper vaults had fallen.

While referring to restorations or reconstructions it will seem natural to turn to Pierrefonds to show how the architects of France had developed military architecture. It really marks the transition from fortress to place.

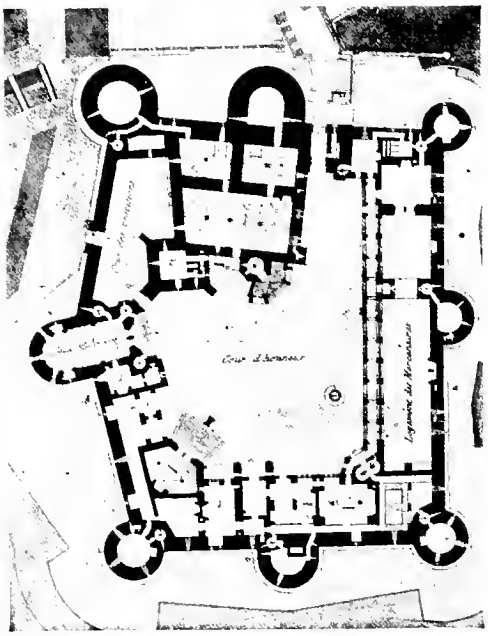
It was built for Louis d'Orleans, in 1390, under Charles VI, whose reign was marked by such a magnificent efflorescence of civil architecture. It was considered a fortress of the first rank as well as a sumptuous and artistic residence. On every other side but on the south the rock shelves abruptly down. It followed



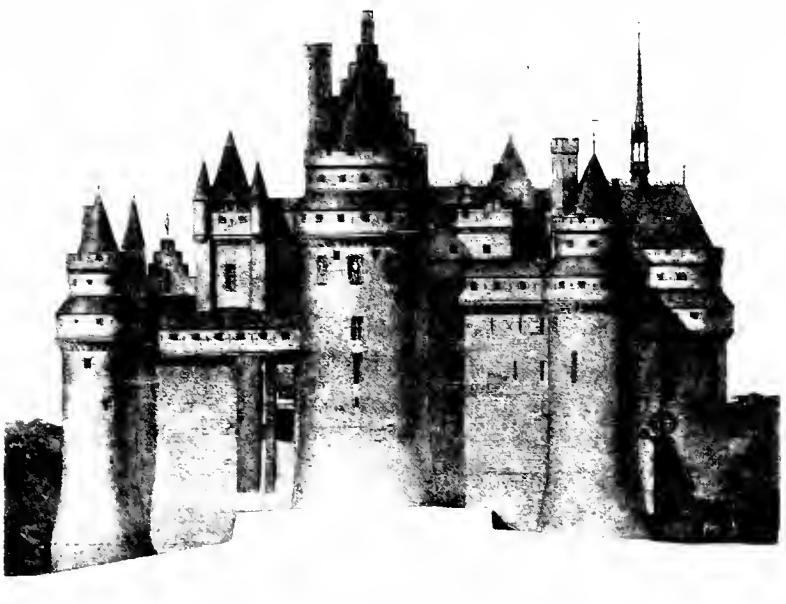
172—Bird's-eye view of Chateau of Pierrefonds.
(From Viollet-le-Duc.)

the most advanced methods of offensive and defensive fortification by circular towers and bastions, according to the theories brought back by the Crusaders from the Orient. The bird's-eye view in Fig. 172, and the plan in Fig. 173, when compared with Coucy, show the practical substitution of a rectangular palace for the

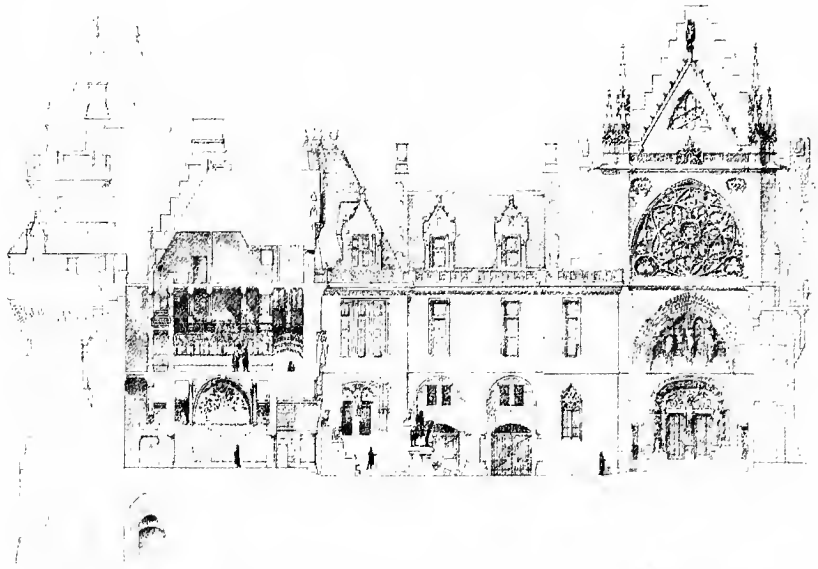
circular donjon. Only the outer fortifications (Fig. 174) are really relied upon for defense. Once forced there is no ultimate place of refuge; only an artistic courtyard, with a beautiful chapel and groups of halls. The substitute for the keep or donjon in the centre of the south side was the palace, divided into four stories, a lower vaulted one of storerooms, and the other three, with flat ceilings, for residence, with their open fireplaces. The three wings were for the garrison and the servants, including stables and store-



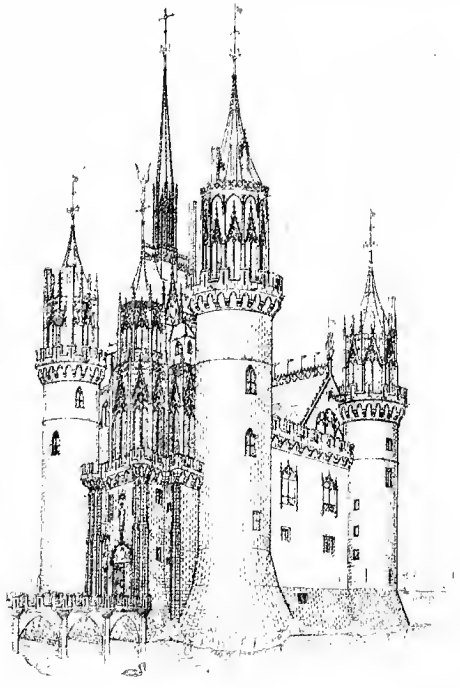
173—Plan of Chateau of Pierrefonds. (From Viollet-le-Duc.)



174—Elevation of Chateau of Pierrefonds. (From *Monum. Hist.*)



175—Chateau of Pierrefonds (section on C-D of plan.) (From *Monum. Hist.*)



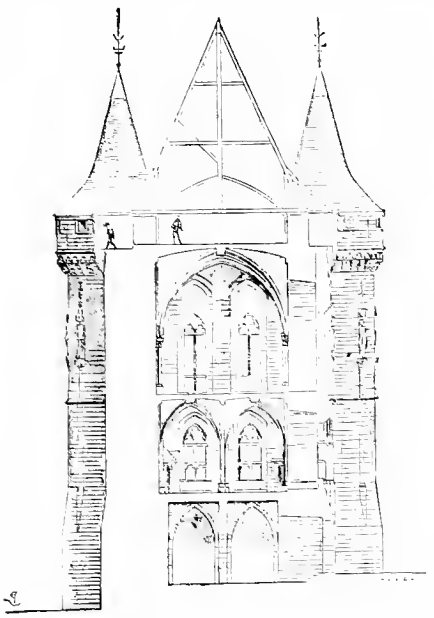
176—Chateau of Mehun-sur-Yèvres, (from XV century miniature.)

rooms. The section in Fig. 175 gives part of one side of the court, with the façade of the richly decorated chapel on the right, in the centre of the east wing.

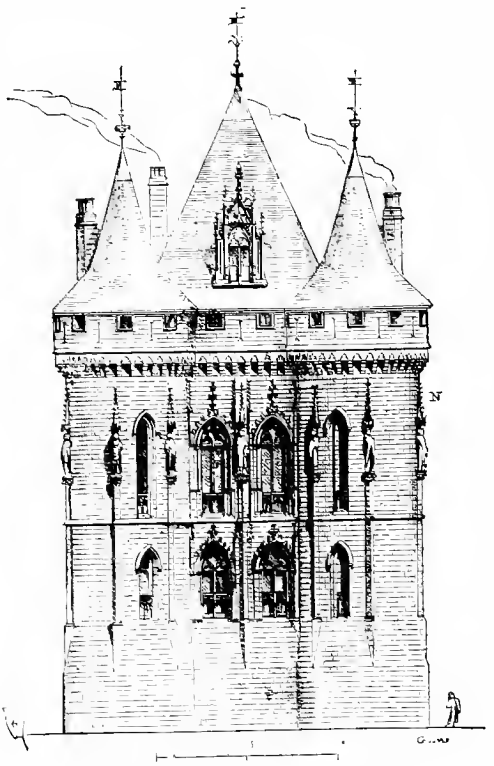
The present condition of the Chateau of Mehun-sur-Yèvres gives so incomplete an idea of its original design that it seemed best to give in Fig. 176 a fac-simile of a miniature from the *Heures* of the Duc de Berri, from which we can judge what progress had been made before the close of the XIV century toward a

residence for pleasure instead of defense. It was built by a famous architect, Guy de Dammartin. It is a perfectly charming composition and makes but little pretense at military architecture.

As an example of a stronghold in the city I have selected for illustration the donjon of the Ducal Palace at Poitiers. It is an unusually massive structure, as its section in Fig. 177 will show, but in the architectural beauty of its exterior (Fig. 178) it places itself distinctly in the class of palatial residences —as was natural to such an artist



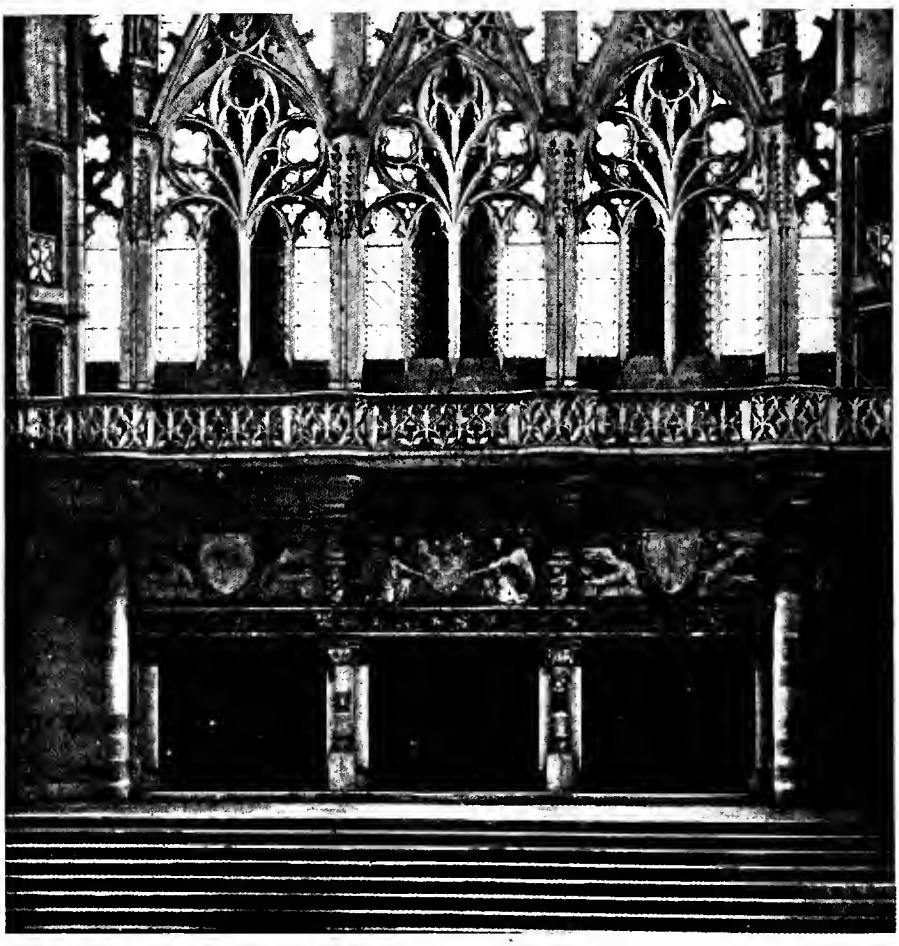
177—Section of donjon of Ducal Palace, Poitiers. (From Viollet-le-Duc.)



178—Elevation of donjon at Poitiers. (From Viollet-le-Duc.)

prince as the Duc de Berri. The large hall in the more conspicuous mansions, castles, manors, episcopal palaces, feudal city palaces, etc., was more usually covered with a ceiled or open roof than it was vaulted; but it was often on the second floor over a dining hall or other hall that is vaulted. An instance is the main hall, 220 ft. long, of this palace of the Duc de Berri at Poitiers, built in 1393, of which the donjon has just been described. The steps leading to the raised upper end or estrade, where the lord and master feasted, held audience or sat judgment, with the monumental triple fireplace, the exquisite triple

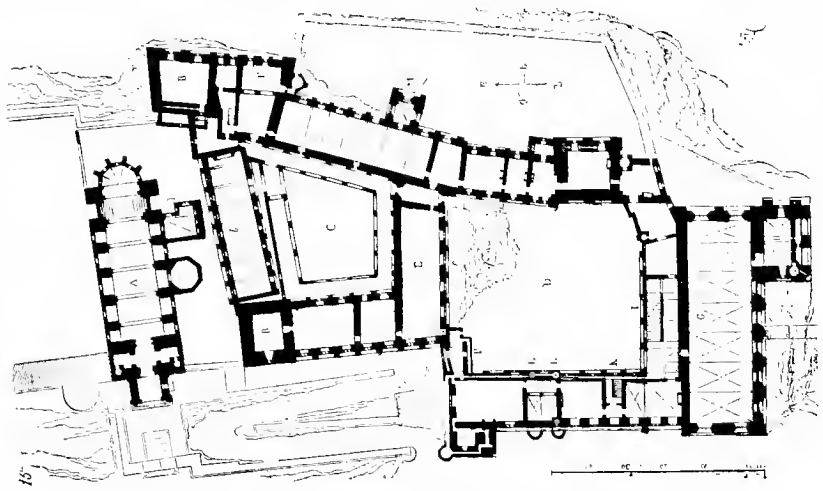
group of windows with their gables and pinnacles and the flanking staircases leading to the gallery are shown in the charmingly treated composition of Fig. 179. In connection with some halls, such as the dining hall of Jacques Cœur, there was a special gallery for the musi-



179—Salle des Gardes, Chateau of Poitiers, upper end. (From Michel.)

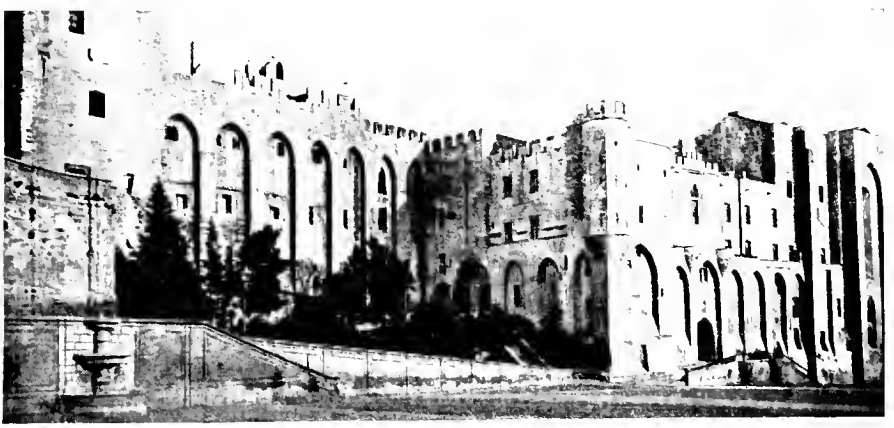
cians. Sometimes, though not often, the gallery was a balcony projecting around the room and upheld by colonnettes or brackets.

The most colossal work of the semi-military style and probably the most important architectural undertaking of the century in the south of France is the famous palace of the Popes at Avignon, of which there is a plan in Fig. 180. This work of the XIV century, built next to the cathedral to house the Pope and his court, household and garri-



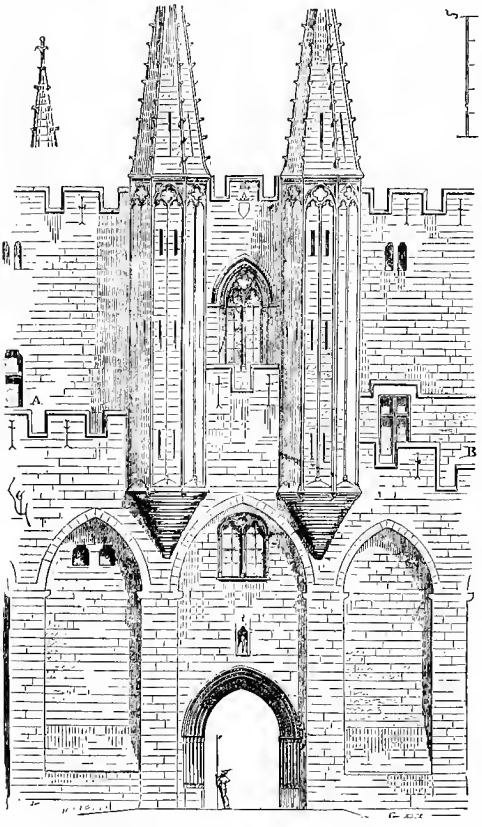
180—Plan of Papal Palace at Avignon. (From Viollet-le-Duc.)

son during the seventy years of exile from Rome, is unique in Europe. The necessity for a fortress to protect the person and treasures of the papacy was more than once demonstrated during this time by the necessity to resist raids and attacks by bodies of freebooters, as well as by the siege of Benedict XIII in 1398. The main portion was built after 1336. The style is the sober brickwork current in the south of France, and the success and impressiveness of the composition is entirely due to a feeling for mass that is so well illustrated, for example, in the cathedral of Albi. The east front in Fig. 181 has the chapel on the extreme left, running back so as to occupy the entire



181—Façade of Papal Palace at Avignon. (From photo.)

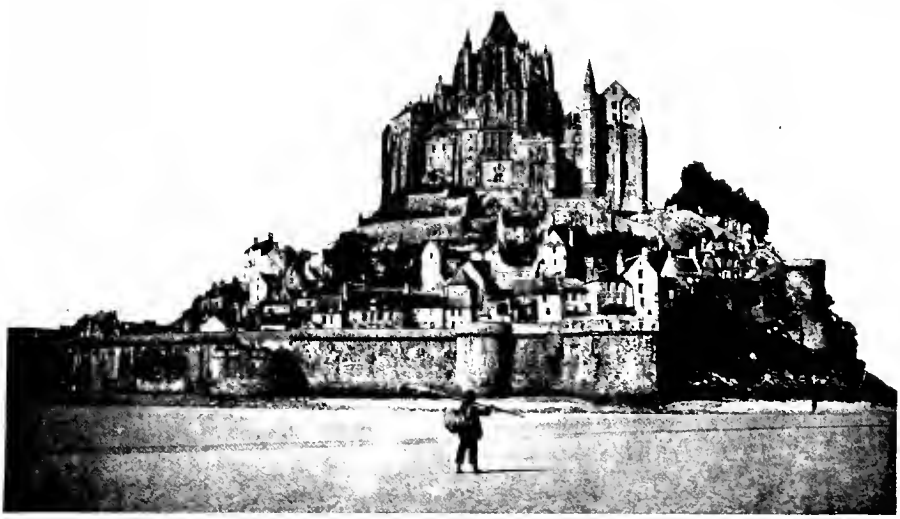
short south side. On the extreme right in the background and detached from the palace is the cathedral of Notre Dame des Doms. The buildings are grouped around two courts: a larger outer court and a cloistered court. In judging the effect of the interiors of the halls and the chapel, it must be remembered that while the architecture of this palace was French, the internal decoration was in the hands of Italian painters, especially of the Sienese and Umbrian schools, whose work was facilitated by the great expanse of solid wall which the architects of southern France preferred to the extreme glazing of the colder and darker north. Restorations during recent years have brought to light several interesting series of frescoes even in the papal sleeping apartments. The chapel was entirely frescoed. In the main doorway, in Fig. 182, the general sobriety of the exterior is slightly tempered, and this is done more freely in the courts.



182—Gateway of Papal Palace at Avignon. (From Viollet-le-Duc.)

Monastic Architecture—French Monastic architecture was far more important outside of France than in France itself. We shall see how the order of Cistercian monks, spreading as it did throughout Europe just at the time when the Gothic movement was in process, carried with it the new ideas, particularly in the conservative and plain forms which it took in Burgundy, where the order originated. In Spain, Portugal, England, Scandinavia, Germany, Italy, we find proofs of their proto-Gothic and Gothic propaganda, in which they often preceded the lay architects and paved the way for perfected Gothic. In France itself their work is hardly noticeable. The monastery of Pontigny—a charac-

teristic Burgundian work—can be appreciated by a study of Fossanuova, Casamari and other Italian works, some of which will be here illustrated, so carefully was the style of the mother province everywhere imitated. Its sobriety was changed during the XIII century to harmonize with the general movement. The Benedictine order did not figure as largely, even in France. After its share in the earliest stage—at St. Denis and St. Germer—it gives way to lay art. There is, however, one class of monuments in which the monastic buildings well repay study: the subsidiary buildings. For cloisters,

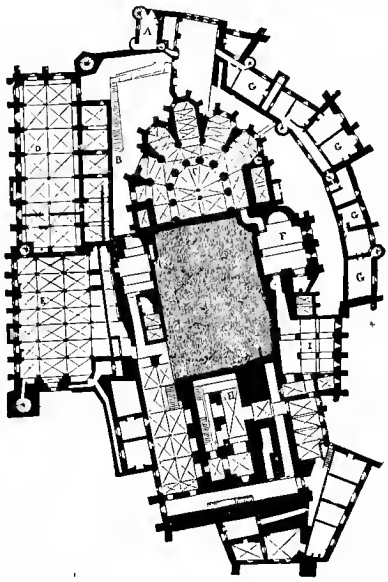


183—Mont St. Michel: general view of monastery. (From photo.)

refectories, chapter-houses and other halls, for hospitals and even kitchens, we must turn to them.

The most spectacular Gothic monastery is the famous Mont St. Michel, on the rock jutting out from the French coast toward England. It had to be a fortress as well as a monastery. Even now the French government is studying ways and means for giving back to it its sea-washed aspect. Its picturesqueness is shown in the general view of Fig. 183. A general plan of the buildings of the upper story is given in Fig. 184, where they are grouped around the church, of which only the choir appears. The halls on the left in the plan form

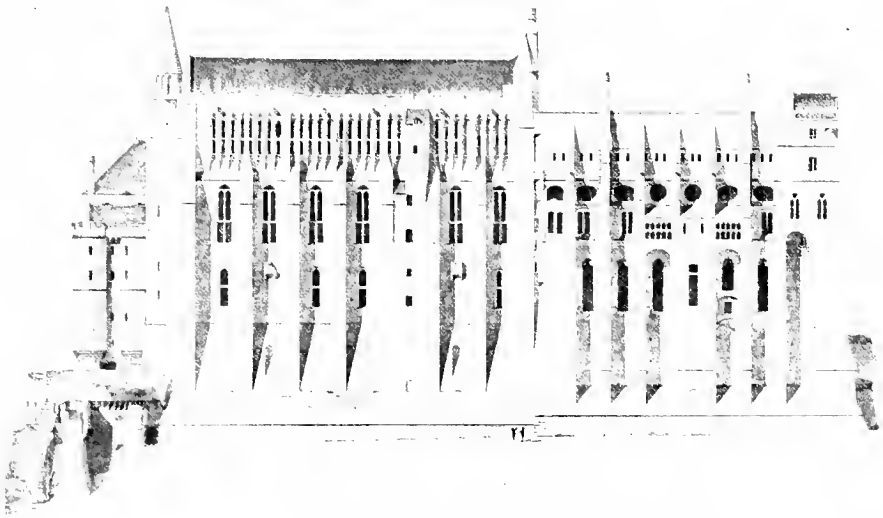
the group on the north front called the "Merveille," and the complete elevation on this side, in Fig. 185, shows how many-storied was this part of the pile. The total height is close to 235 ft. and the material throughout is a fine granite, even the highly decorated choir of the church. The double character, military and monastic, is evident in the arrangement. On the rez-de-chaussé is not only the monks' refectory, with its double line of vaulted bays but the three-aisled vaulted refectory of the garrison. On the main floor, which is here reproduced in Fig. 184, there is the monks' dormitory in D, above their refectory, and the garrison's hall or Salle des Chevaliers, above



184—Plan of main story of Monastery of Mont St. Michel.
(From Viollet-le-Duc.)

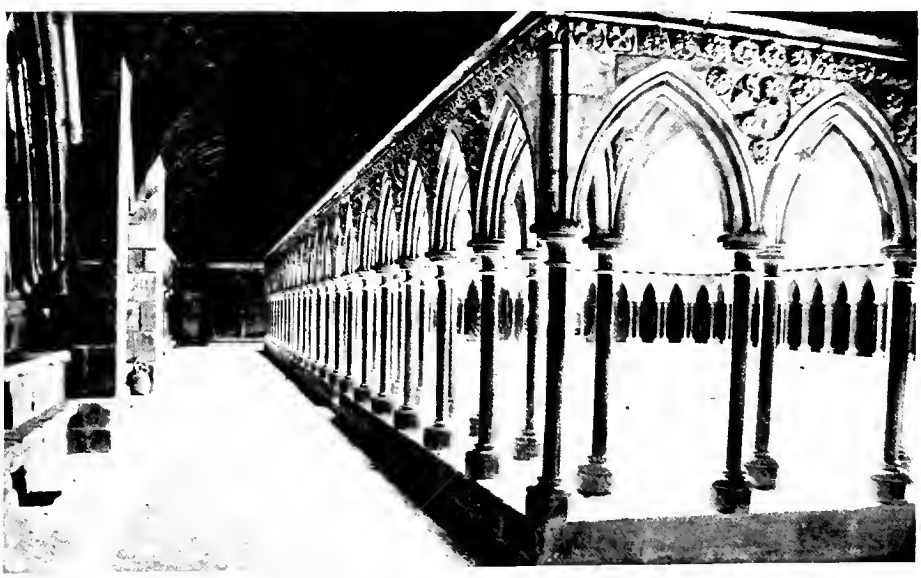
their refectory and corresponding in plan with loftier proportions. In C is the vast crypt rebuilt at the close of the XV century to support the new choir. In G are the lodgings of the Abbot and his guests. On the story above, the cloister stands over the Salle des Chevaliers and the church occupies the centre.

Its great halls partook more of a baronial than a monastic character, especially the Salle des Chevaliers. The architecture is almost entirely of the XIII century. An exception is the late Gothic choir of the church, which has been illustrated in Fig. 138. From the various highly interesting units the one selected here for illustration in Fig.



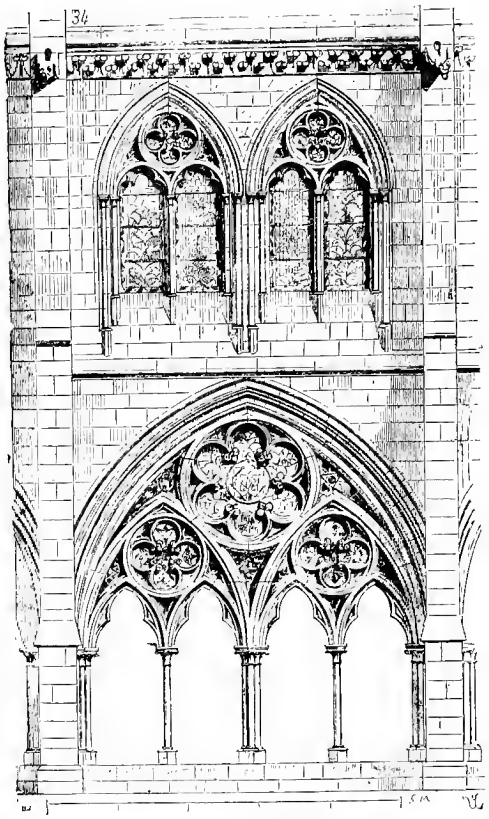
185—Elevation of the "Merveille" or N front and entrance of monastery of Mont St. Michel. (From *Monum. Hist.*)

186 is the cloister. It is unique both in plan and ornamentation: in plan because the two rows of colonnettes are set not opposite but diagonally, so as to form triangles with peculiar vaulting; and in orna-



180—Mont St. Michel: cloister of monastery. (From photo.)

mentation because of the rosettes and other foliated decoration filling the spandrels and forming the frieze. This is the more prominent because of the English plain turned capitals. In fact, it is evident to any one familiar with the more decorative school of English Gothic after c. 1250 that the decorative scheme here is of English and not French origin.

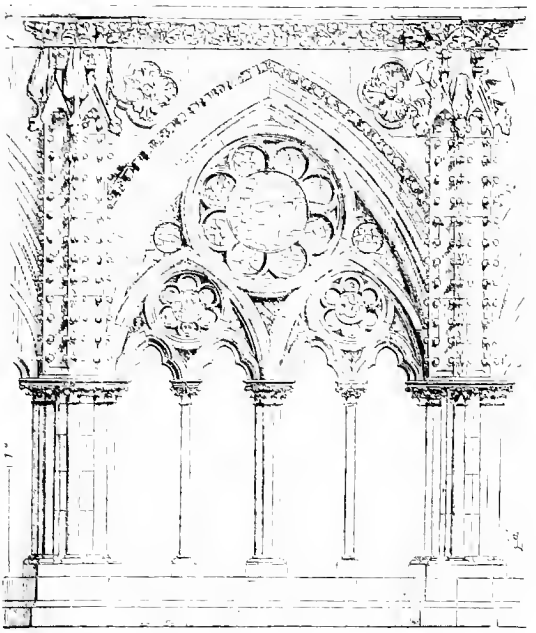


187—Cloister of Cathedral of Rouen. (From Viollet-le-Duc.)

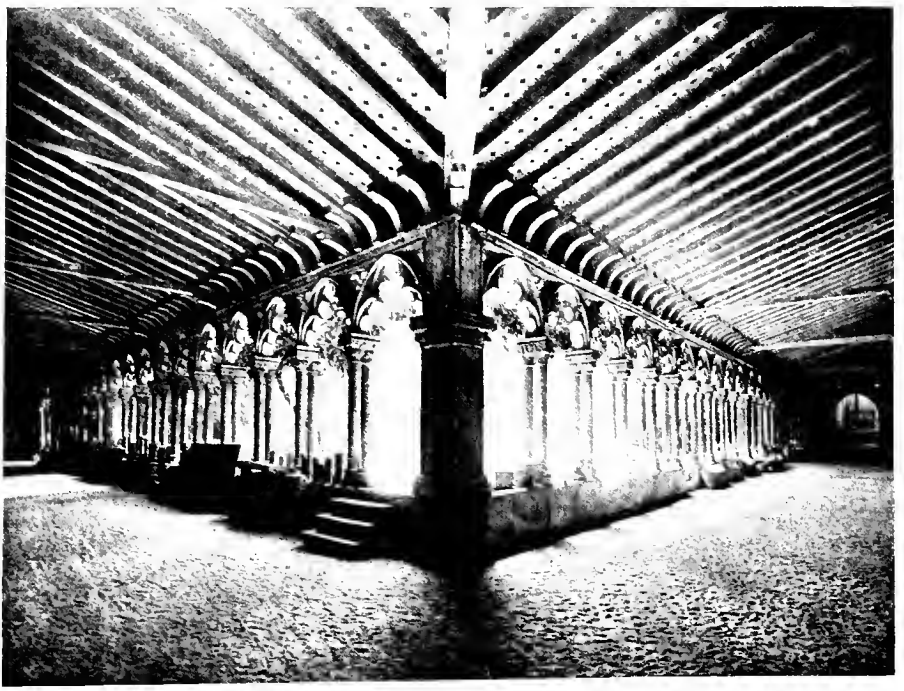
This cloister of Mont St. Michel was one-storied. In the same region, at Rouen, the cloister of the cathedral, of which a bay is given in Fig. 187, gives the rarer two-storied type of the developed style. An ultimate stage in richness of detail is shown in Fig. 188, the exquisite cloister of St. Jean des Vignes at Soissons, where the buttresses have become absorbed into piers and pinnacles. In the South the cloister of the present Musée at Toulouse has a most effective pent roof (Fig. 189), which is interesting to compare with the pointed barrel

at Mont St. Michel and the normal Gothic ribbed vaulting of others.

The elasticity of Gothic forms is illustrated in the small interiors of annexes to monasteries or cathedrals. Nothing could be more graceful and daring than the refectory of St. Martin des Champs in Paris (XIII century), with its two rows of vaults. The central shafts are made perilously slender to secure a hall-like effect, and the necessity for flying buttresses to secure equilibrium is avoided by centering the vaulting toward the in-

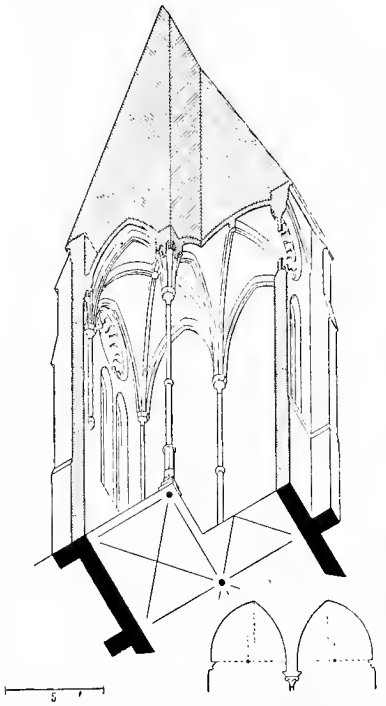


188—Cloister of St. Jean des Vignes at Soissons. (From Viollet-le-Duc.)

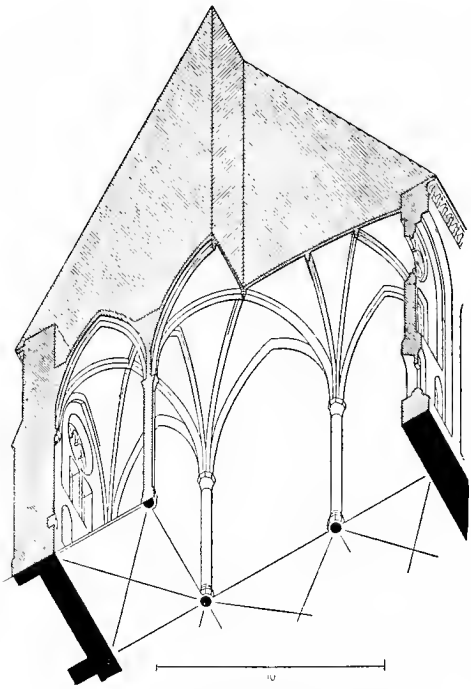


189—Cloister of the museum, Toulouse. (From photo.)

terior, as is shown in the diagram of the lower part of Fig. 190. Less daring but still slender are the shafts that divide the main hall of the hospital of the monastery of Ourscamp (Figs. 191–192). This interior somewhat apes that of a church, with the superior width of the central aisle. But it is noticeable that while in church interiors—except toward the south—plain shafts were abandoned at the beginning of the XIII century, they continued in use in these subsidiary interiors in the elongated form we have noticed in St. Serges at Angers and St. Nazaire at Carcassonne.



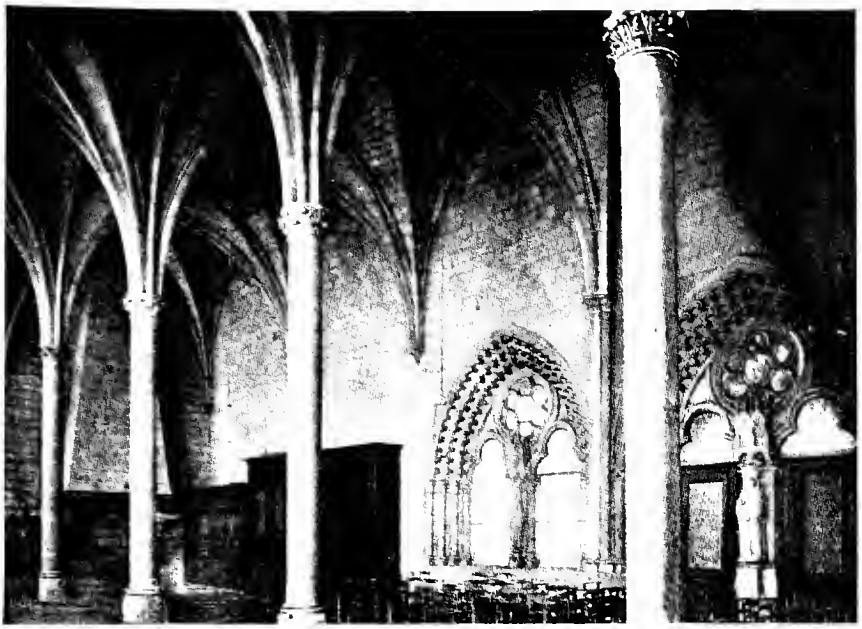
190—System of refectory of St. Martin des Champs, Paris. (From Choisy.)



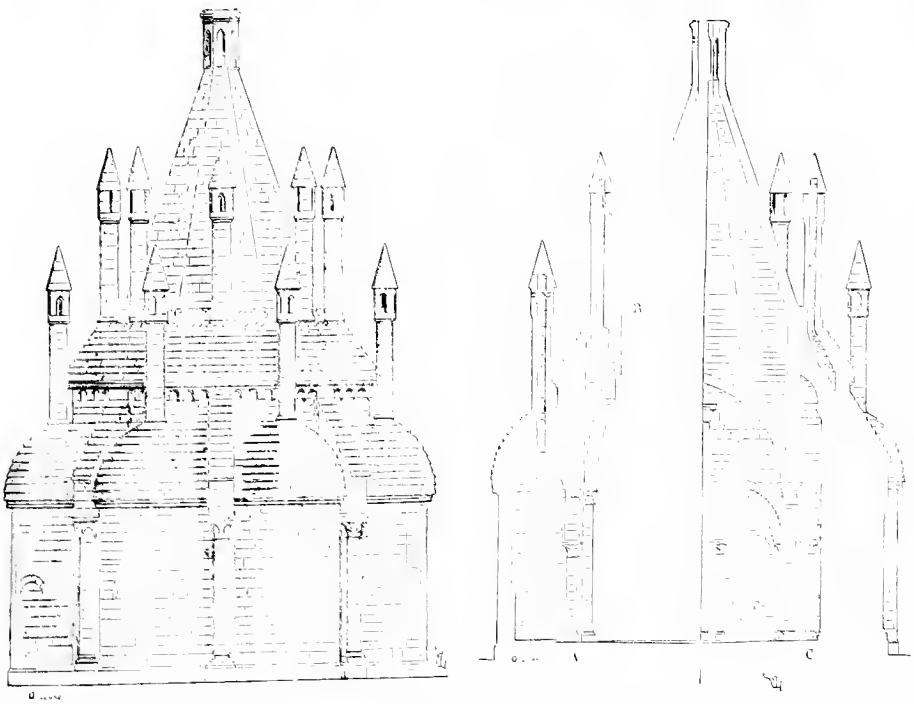
191—System of hospital of Ourscamp (From Choisy.)

Finally, to show how much originality and architectural character may be crowded into the most subordinate units of a monastery, Fig. 193 gives the exterior and Fig. 194 the sections of the kitchen of the Abbey of Fontevrault. As a scheme for cooking for a large constituency it is perfectly convenient and practical, with its central plan; its separate apsidal fires each with its chimney and with central ventilation. The whole pyramidal design is artistically perfect.

Richer than the monastic were some Episcopal halls. The view



102—Interior of hospital, Ourscamp. (From Enlart.)



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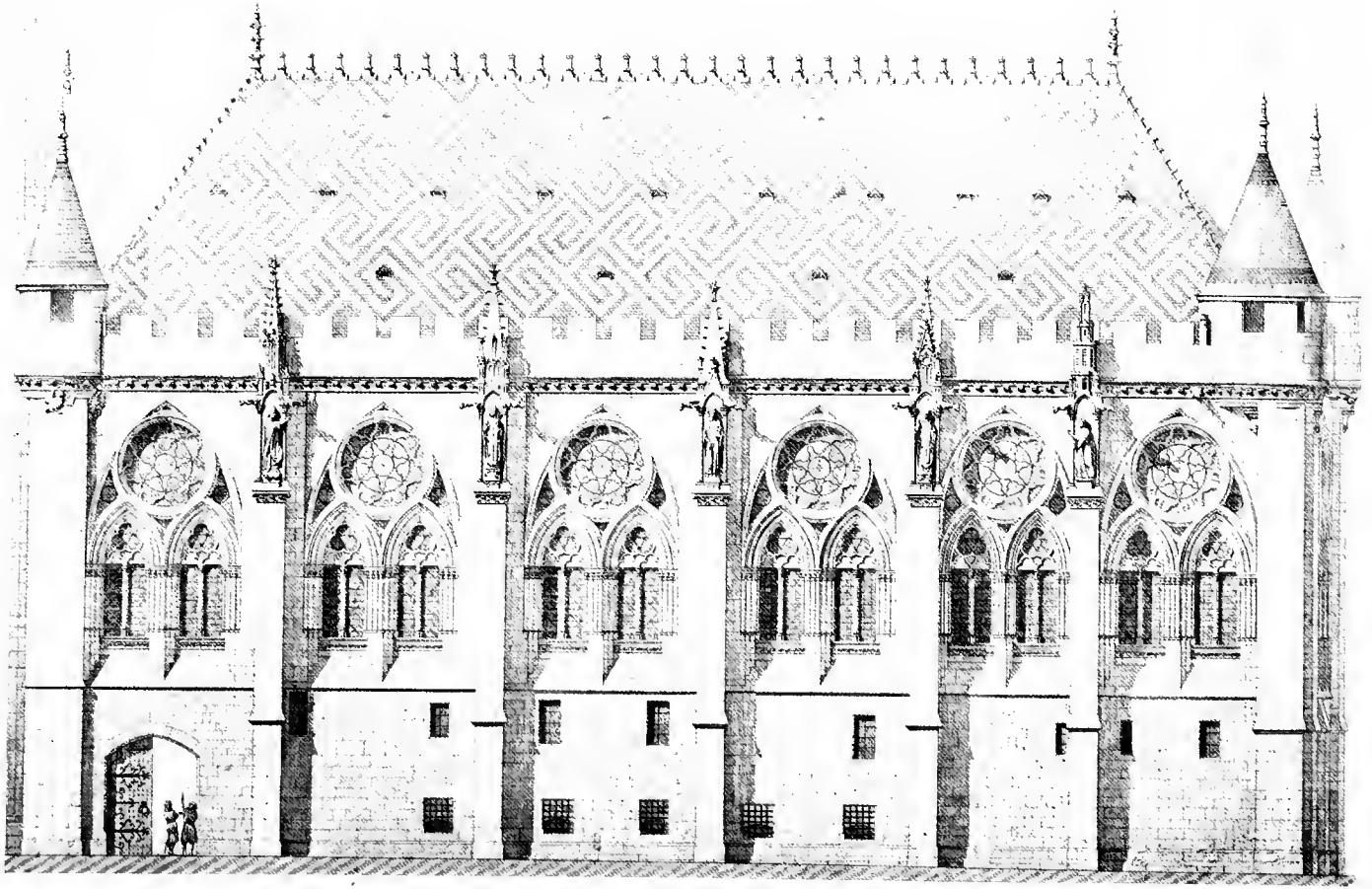
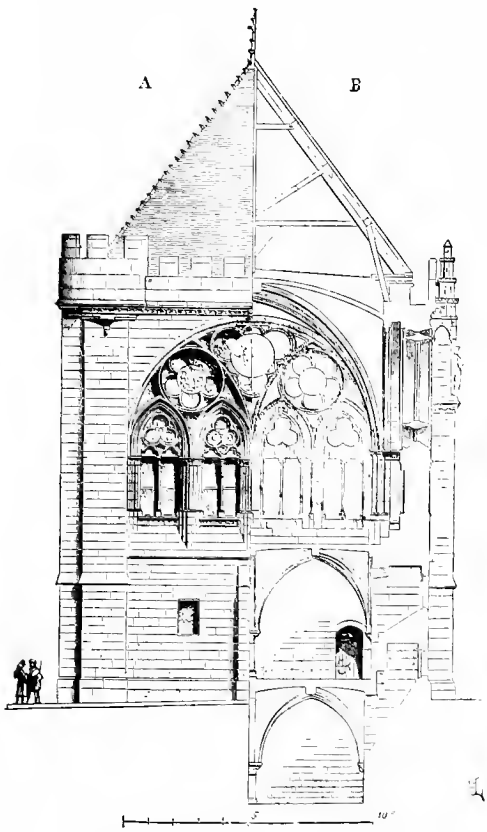
Kitchen of monastery of Fontevrault. (From Viollet-le-Duc.)

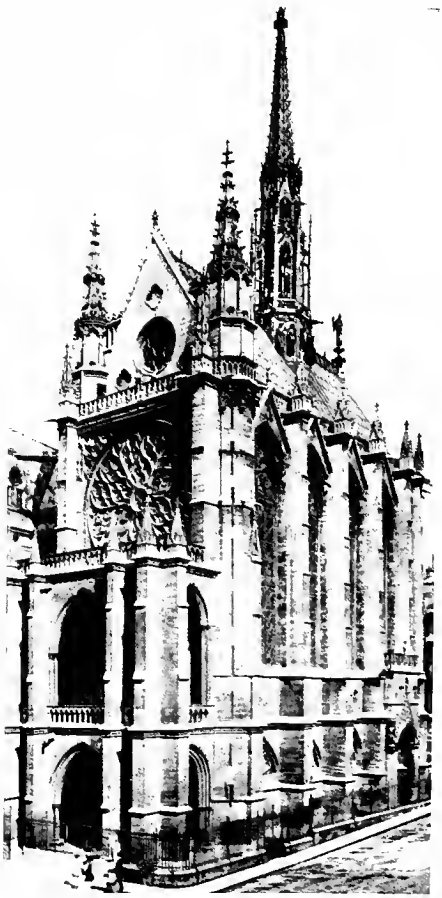


195—Synodal hall at Sens. (From *Monum. Hist.*)

of the long side of the synodal hall attached to the archbishop's palace at Sens, in Fig. 195, shows the external aspect of the richer of these halls in the XIII century. The windows in this instance are richer than in the two halls whose interiors have been reproduced. This meeting-hall at Sens is narrow and vaulted, without any division into aisles. In this way it resembles rather the class of chapels of which the



196—Synodal hall at Sens: section.
(From Viollet-le-Duc.)



107—Exterior of Ste. Chapelle in Paris.
(From photo.)

most famous is the Sainte Chapelle in Paris. The section in Fig. 196 shows its division into two stories and a cellar. It differs in type from the Sainte Chapelle in the absolute subordination of the lower story.

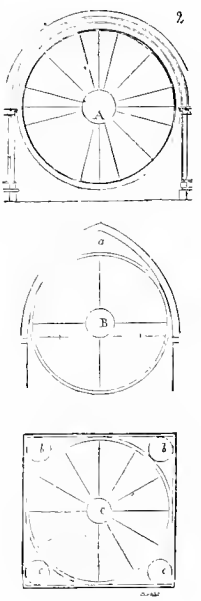
The Sainte Chapelle du Palais, or chapel of the Law Courts of Paris, is so well known that it hardly requires description. As a work of the middle of the XIII century it stood for the highest contemporary

achievements, as did its contemporary, the nave of St. Denis. The view in Fig. 197 shows its division into the upper and lower chapel and the unusual double-storied open porch, which partially masks the wonderful flamboyant tracery of the rose, which is illustrated in Fig. 200; while the windows are reproduced in Fig. 205, and the internal decoration in Fig. 222.

CHAPTER VI

DEVELOPMENT OF ARCHITECTURAL DETAIL AND DECORATION IN FRANCE

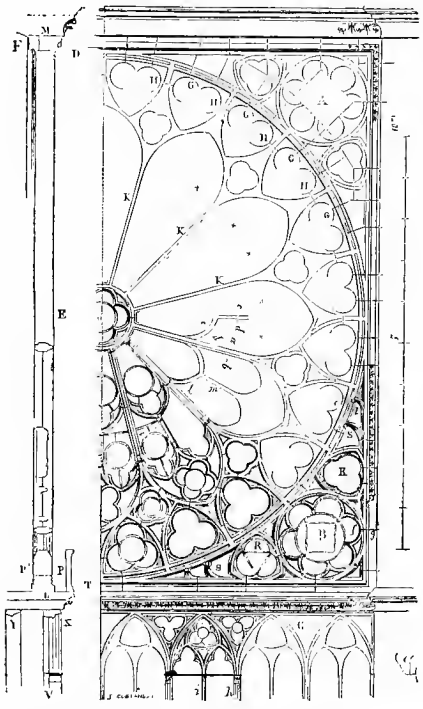
AFTER this survey of the history and various classes of monuments in France it only remains to analyse the development of specific forms during this period of c. 1150–1525, and especially the windows and their tracery; the piers, with their bases and capitals; the principle underlying the development of ornament. As the types and changes of plan and elevation and the methods of vaulting and construction have already been studied, this will complete the analysis of French Gothic, which had to be far more detailed than will be the case in other countries.



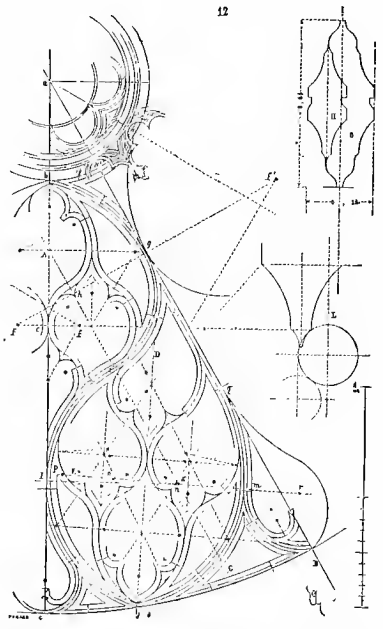
198 — Evolution of wheel window. (From Viollet-le-Duc.)

As tracery is so important an indication of age and style and as it, as well as the rest of Gothic essentials, was first developed in central France, it is interesting to trace its early evolution in connection with the forms of windows. First, the rather special forms of the wheel or rose window. Fig. 198 outlines the three main types followed in the setting of the opening developed out of the "oculus" or untraceried round opening in a solid wall. In their variants one can follow the passage from primitive through developed and geometric to flamboyant forms; they also illustrate the movement toward unification of design. The primitive scheme of a circular opening in a solid wall which was used at Laon (Fig. 34), Chartres (Fig. 49) and Notre Dame (Fig. 26), was largely replaced by that of an opening framed in a pointed discharging arch, though it survived until the end in such flamboyant masterpieces as the great rose of Amiens

(Fig. 61). Such large central pointed untraceried windows as that of Senlis (Fig. 18) heralded the second type, illustrated by the façade of Coutances (Fig. 93), and in its more developed and lighter forms in one of the minor roses over the portals of the west front at Reims (Fig. 82). The present main rose at Reims, seen in Figs. 54 and 55, is not part of the original scheme. Perhaps the drawing in Fig. 53, which is of the Coutances type, represents the first draft. The restoration by Viollet-le-Duc in Fig. 52 shows his belief that the circular



199—Rose window and gallery of south transept at Notre Dame, Paris. (From Viollet-le-Duc.)

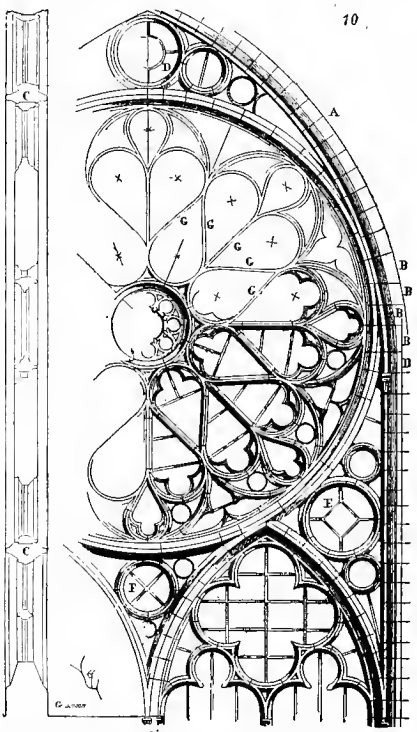


200—Detail of rose window of the Ste. Chapelle in Paris. (From Viollet-le-Duc.)

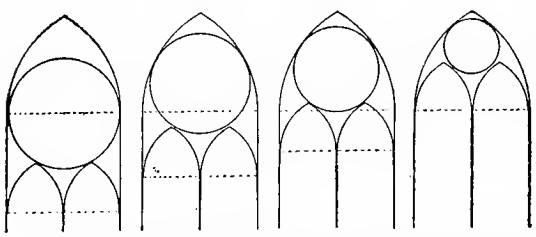
discharging arch was the design actually carried out at first, and that the present somewhat disconnected pointed discharging arch (Fig. 54), with its tracery, was a modification. This final Reims type remained popular until the close of the Gothic period and can be studied, for example, in Fig. 134, at Toul. In this connection it must be noted that the plain central pointed window, without any inscribed rose, of the Senlis-Coutances type, also continued, as is shown in the flamboyant façade at Vendôme (Fig. 133).

Meanwhile a third type was coming into general use: the simpler

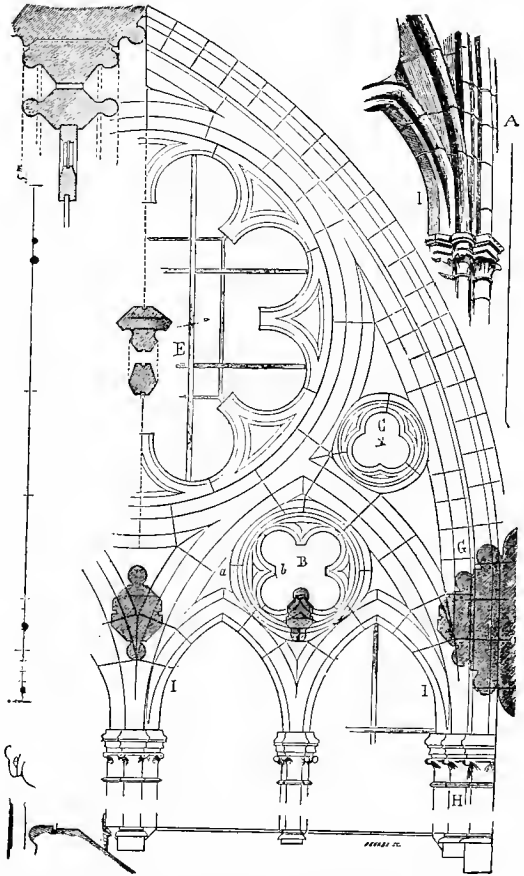
form of the wheel or rose set in a square panel. It was originally a variant of the Notre Dame type, and it can be seen in Fig. 106 at Poitiers. Its most exquisite development came in the south transept of Notre Dame (Fig. 199) where the panel is perforated in a traceried design dating from the middle of the thirteenth century and also at the Ste. Chapelle in Paris (Fig. 200), where the tracery had been elaborated and refined by the schools of Champagne and Ile-de-France. In this connection there took place a further evolution. In harmony with the tendency toward unification of design and amalgamation of units which led, as we have seen (p. 111), to the reduction of the three internal stories to two, the architects of these schools combined in one design the rose window and the gallery under it. This was done in the case of both types of window that have been described—that inscribed in a pointed arch and that inscribed in a square frame, and the reader is referred to Figs. 199 and 201, in which is reproduced the beautiful design of St. Nicaise, for a comparison of the vault, and especially to Fig. 119, where the rôle of the rose or wheel in the façade of St. Nicaise is made clear. These latest designs did not absolutely displace previous schemes. In Fig. 132 we see how the round-headed relieving arch and separate gallery were retained until a late date at Dieppe. In so far as tracery is concerned the rose windows followed the type



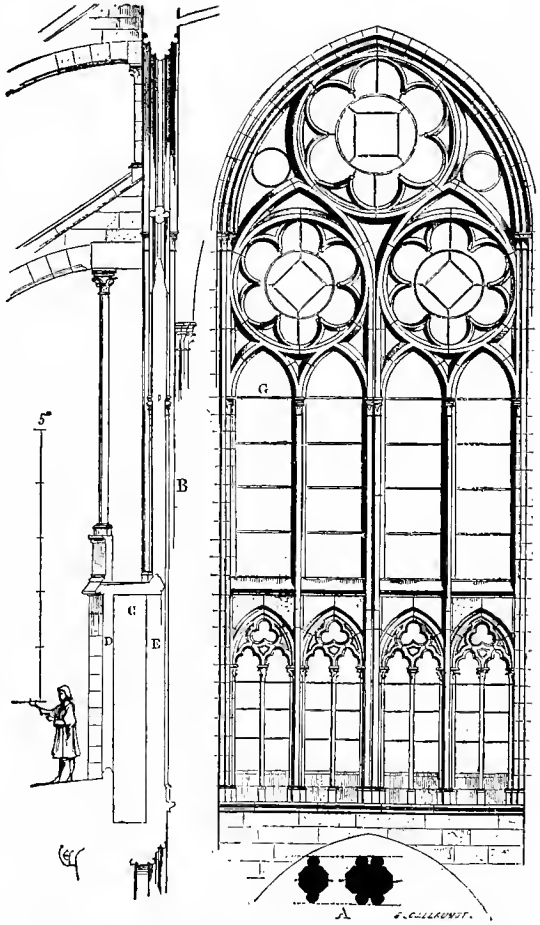
201—Rose window of St. Nicaise at Reims, reconstructed. (From Viollet-le-Duc.)



202—Evolution of window skeleton in early French Gothic. (From Dehio.)



203—Structure of window of cathedral, Amiens.
(From Viollet-le-Duc.)

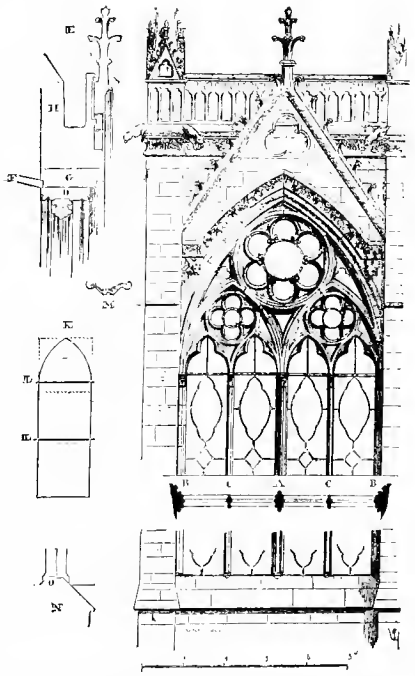


204—Window and wall system of nave of St. Denis.
(From Viollet-le-Duc.)

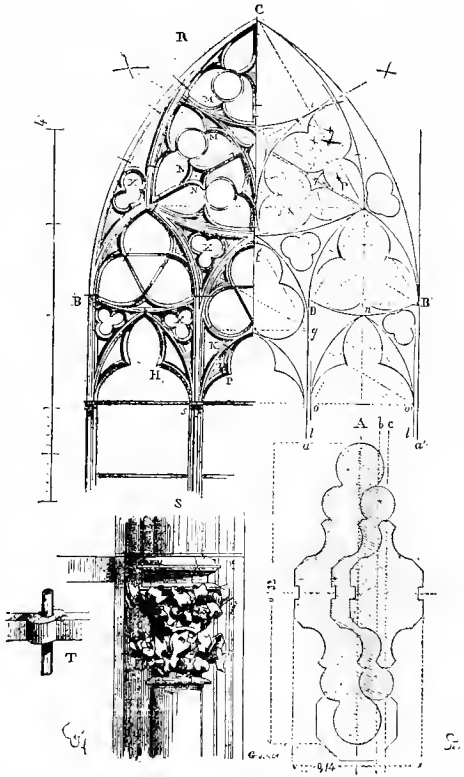
set by the clearstory windows with added complexities, and with certain interrelations made necessary by the special statics of the broad rose in order to prevent dislocation by pressure of the façade wall. The late roses at Amiens (west front), St. Ouen at Rouen (transepts) and Senlis (transepts) are particularly beautiful; so is that of St. Nazaire at Carcassonne shown in Fig. 128.

But it is the more usual types of window that supply the safest norms. Fig. 202 presents the successive stages in the relation of the oculus to the sub-arches in the two-light normal clearstory window from the beginning of tracery in c. 1200 to about 1250, showing the progressive diminution of the oculus. The latter stages are illustrated in Figs. 203 and 204, which show how the rather heavy design of Amiens was lightened at St. Denis. In Fig. 31 we have seen how the windows at Notre Dame were remodelled in order to introduce this type, and in Fig. 46 is an instance of a primitive attempt at a juxtaposition of two-light window and oculus at Chartres before the new scheme had become established, shortly before 1200. Gables were introduced, to give individuality to each window. An early instance is the Ste. Chapelle (Fig. 205), and on p. 114 and Fig. 124 there is a charming variant with a double gable at St. Urbain of Troyes. With the greater freedom of geometric tracery there appears the window with three instead of two pairs of two-lights; an early and beautiful example is at St. Nazaire of Carcassonne in Fig. 206 where the designer showed the same originality and daring as in his whole building. It is a fine example of the geometric work of the XIV century. Such designs as this led to the ultimate change fully realized in the flamboyant age, when there is no difference in the articulating value of the various parts of the tracery, by graduations in heaviness or amount of relief. The window at Eu (Fig. 207) illustrates the type with uniform tracery of curvilinear design. There is a curious overflow of late window tracery over the exterior, especially of the main façades: for example, on the Vendôme façade (Fig. 133).

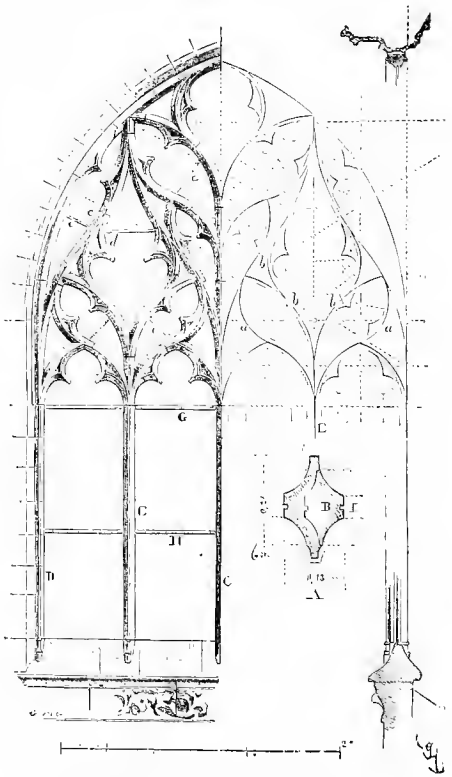
The new attitude toward plant life assumed by Gothic architects and decorators was one of the great events in the history of art and its importance has already been referred to. M. Mâle and others have classified and catalogued the kinds of plants and trees that were utilized and transferred to stone. The natural and the XIII century carved fig-leaf are illustrated in Fig. 208 to show how closely nature was reproduced. Once the principle was accepted, the choice was



205—Window of Ste. Chapelle, Paris. (From Viollet-le-Duc.)



206—Window of transept at St. Nazaire, Carcassonne. (From Viollet-le-Duc.)

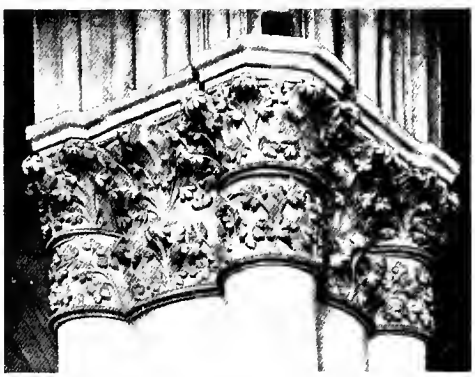


207—Window of choir of church at Eu. (From Viollet-le-Duc.)

unlimited. The heavier water-plants that were the favorites at the beginning (e. g., Fig. 28) were largely replaced in the XIII century by the more delicately articulated forms, except in such classes as crockets, finials, cusps and griffes. Attempts have been made to give an historical succession to the way in which the decorative foliage was connected with the background, especially in capital designs, though the same principles are extended

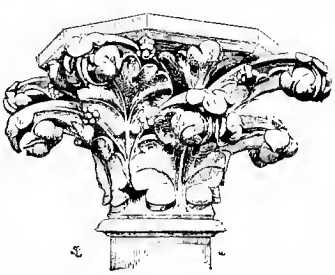
208—Fig-leaves, natural and carved. (From Viollet-le-Duc.)

209—Early capital at St. Leu d'Esserent. (From photo.)



210—Capital of pier of nave, Cathedral of Reims. (From photo.)

to cornices, archivolts, culs-de-lampe and other details. With few exceptions the surface of the ground is kept as an outline distinct from the decorative work. Of course when a comparison is made between a capital of the type of St. Leu in Fig. 209 with one of the type of Reims in Fig. 210, the earlier example may seem to illustrate the merging of the two elements, while in the latter the ornament seems appliqué. But this is largely due to two reasons. In the first place to the tendency to make the crockets seem part of the ground, as is here illustrated in the wonderful capital of Notre Dame des Champs (Fig. 211), where the



211—Capital of refectory, Notre Dame des Champs, Paris. (From Viollet-le-Duc.)

contrast in treatment between the crockets and the rest of the foliage is especially marked. The crocket idea is perhaps a concession to the tradition of the classic anthemion. In the second place in capitals of the St. Leu type, the illusion is due to the spreading of the decorative design at the base. When, in later and freer work, less affected by anthemion traditions, thin-stemmed leafage was put in this position, the background was necessarily exposed most at the bottom instead of at the top and the relation of the two elements of ground and decoration was reversed, as at N. Dame des Champs. In the very free type at Reims, given in Fig. 212, it is the centre that is left free. The contrast between the lush heavy crockets and the stemmed leafage is beautifully illustrated at the chapter-house of Noyon cathedral (Fig. 213). While the general tendency during the XIII century was toward delicacy of detail, increase of projection and prodigious virtuosity of undercutting, the decorators varied their treatment according to the quality of the free-stone at their command as we have seen was the case with the window tracery. An extreme example of irregular and thin concealment of the bell of the capital is given in Fig. 214 from Amiens.

212—Capitals in cathedral of Reims. (From photo.)

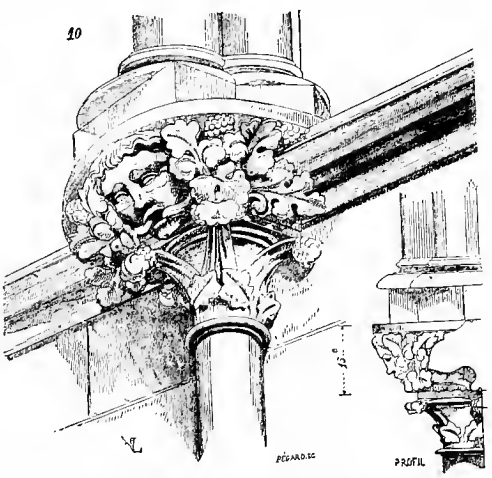
213—Crocket and foliated archivolt in chapter-house of Noyon cathedral. (From Viollet-le-Duc.)

The development of free design in the capitals was assisted if not caused by the change in the form and grouping of the capitals them-

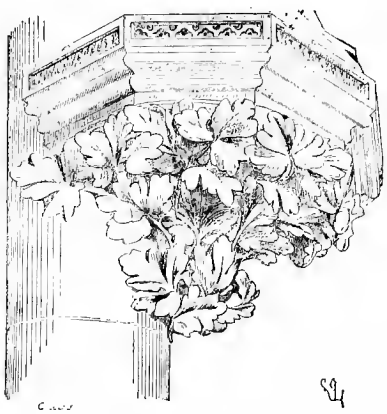
selves that came with the substitution of the grouped pier for the single column, as illustrated by a comparison between Figs. 209 and 210 or the still freer triplet of Fig. 212. The square plinths became polygonal on a common-sense principle of design. Among the types of variations that are here illustrated is the prolonging of the capital by means of a wide neckband with the design practically merging into the capital (Fig. 210); the creation of a super-capital even more thoroughly homogeneous (Fig. 215); the elimination of the solid bell of the capital in cul-de-lampe schemes such as Fig. 216.

214—Capital from Amiens cathedral. (From Durand.)

There were other ways in which the decoration of the capitals was occasionally supplemented. A most unusual and charming design is

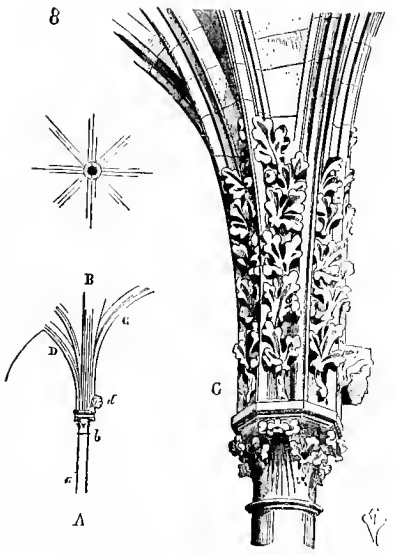


215—Sill-course and cul-de-lampe at Notre Dame, Semur. (From Viollet-le-Duc.)

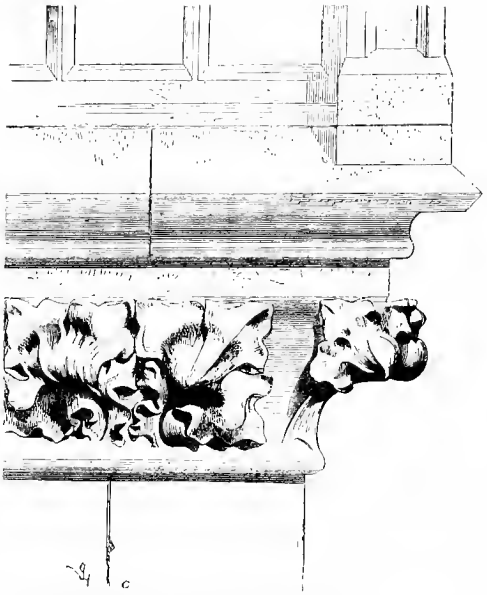


216—Cul-de-lampe carrying statue at Ste. Chapelle, Paris. (From Viollet-le-Duc.)

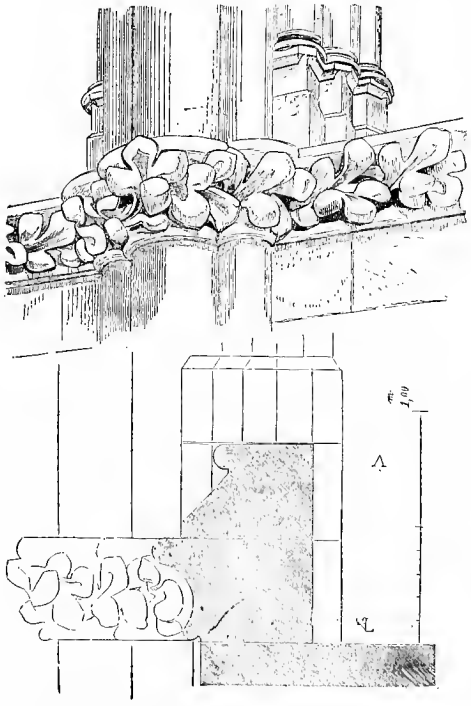
Fig. 217, where lines of foliage take the place for a certain distance above the capital of the group of ribbings: the diagram on the left shows that this was done to avoid the inartistic effect of vaulting ribs springing from different levels. In the spread of foliated ornamentation which was a gradual evolution of the half-century between 1200 and 1250 and kept pace with that of architectural detail, an exact correlation of ornamental design to nearly each part of both exterior



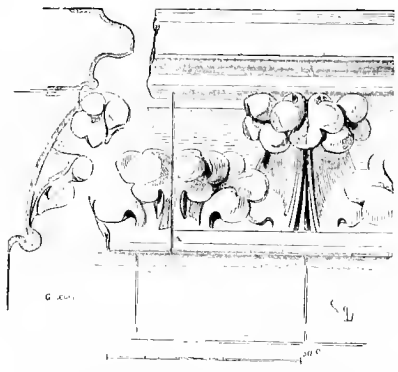
217—Decorated ribbing. (From Viollet-le-Duc.)



218—Cornice at top of tower of cathedral of Amiens. (From Viollet-le-Duc.)

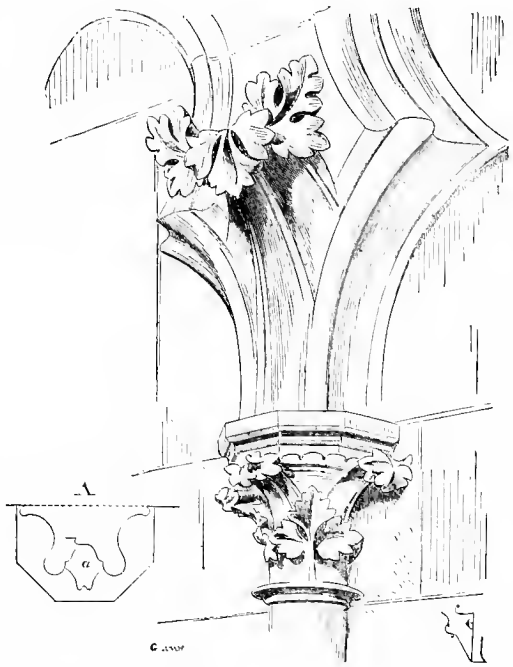


219—Sill-course of triforium of cathedral of Amiens. (From Viollet-le-Duc.)



220—Cornice in choir of cathedral of Troyes. (From Viollet-le-Duc.)

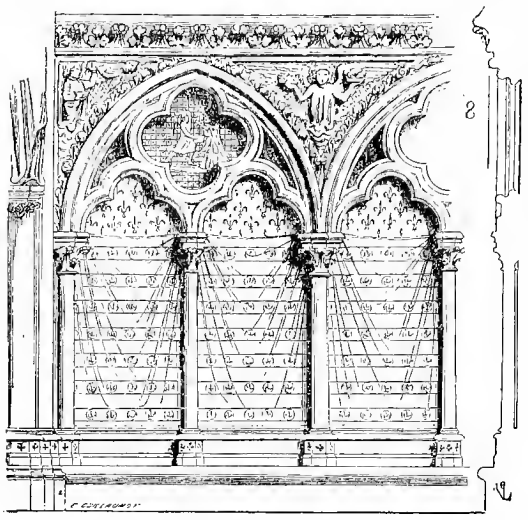
and interior was secured. The heavy forms in Fig. 218 were suited to their great height on the tower of Amiens. The bold projection and simplicity of the triforium sill-course also at Amiens in Fig. 219 was equally suited to its position. So is the bold overhang of the choir cornice at Troyes (Fig. 220). In fact, one of the features of Gothic sculpture that most challenges admiration, evident also in



221—Summer-stone at St. Père-sous-Vézelay.
(From Viollet-le-Duc.)

figured work, is the flexibility and ingenuity of the method of adapting treatment to place and height. One sees it even in such small detached features as the crocket on the summer-stone at Vézelay in Fig. 221, with its extreme undercut and overhang.

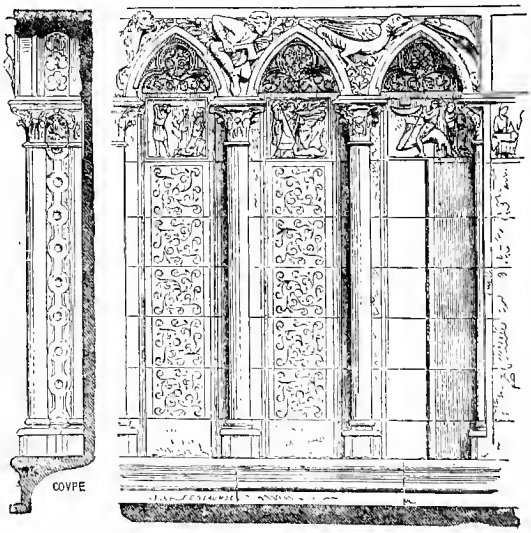
Decorative work, like figured work, was severely restrained in Gothic interiors in France—far more than we shall find to be the case in England and Germany—and blossomed over the exterior. The Ste. Chapelle in Paris is one of the exceptions, with its statues of the apostles and the charming surface decoration of its lower arcade (Fig. 222), in which color, foliage and figures are harmoniously combined. The far more frequent decoration of external surfaces is



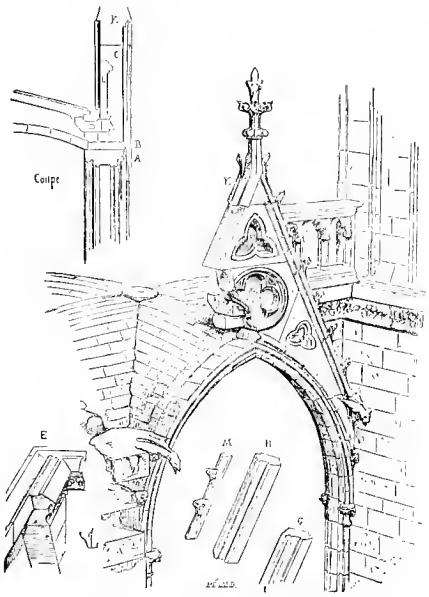
222—Surface decoration, lower arcade, interior Ste. Chapelle, Paris. (From Viollet-le-Duc.)

shown in Fig. 223 from Notre Dame in Paris, and such work occurs in connection with nearly all the lower west fronts of the best period and also on many transept façades, as we see in Fig. 77, from Chartres, and even at a considerable height, as in and around the gallery at Amiens (Fig. 62).

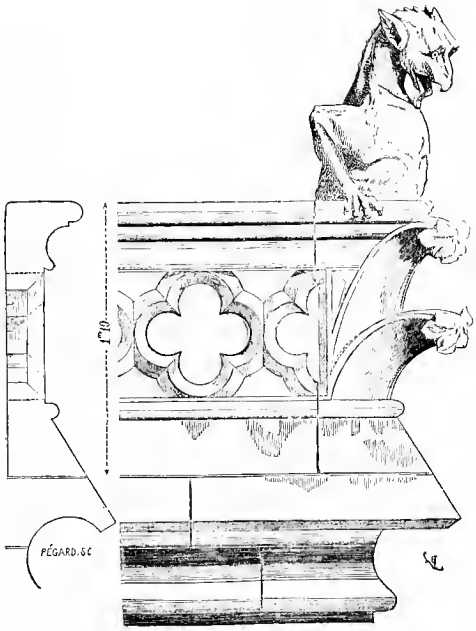
Plate II, reproducing the spring of the arch over the pier between two portals on the west front of Amiens, is a particularly charming instance of the extent to which surface decoration was carried without passing the bounds of good taste. Reference to Fig. 186, the cloister of Mont St. Michel, shows it carried perhaps to excess. The structural relation of such elements of the decorative work as are not carved in the mass is illustrated in Fig. 224 from the Ste. Chapelle, showing the purely structural work on the left and the decorative accretions — gable and gallery — on the right. The way in which such balustrades were constructed appears in Fig. 225 from the west front of Notre Dame, while the more elaborate design of a half century later can be seen in the balustrade of its south transept in Fig. 226. The larmier under the balustrade for shedding water had profiles that were studied with care and



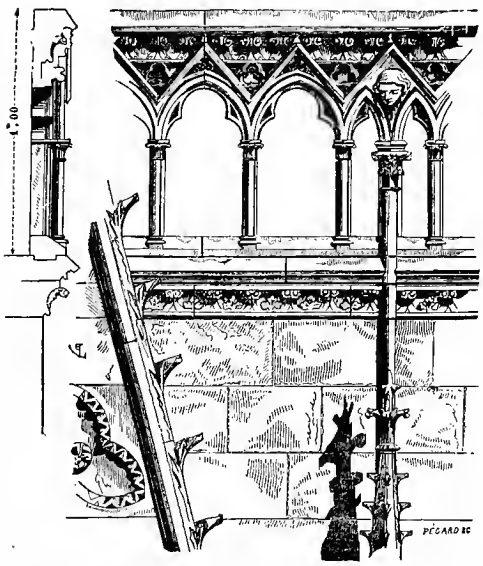
223—Surface decoration; central portal, west façade, Notre Dame, Paris. (From Viollet-le-Duc.)



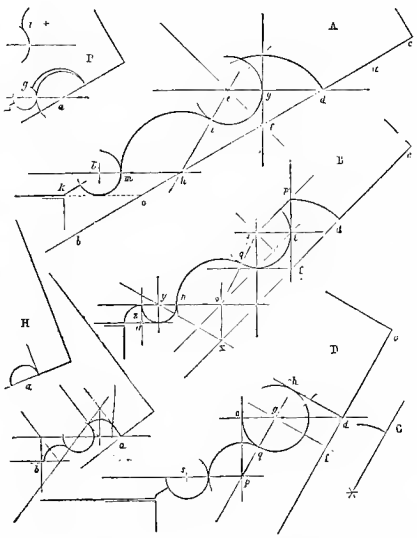
224—Relation of gable, gallery and cornice to structure, at Ste. Chapelle, Paris. (From Viollet-le-Duc.)



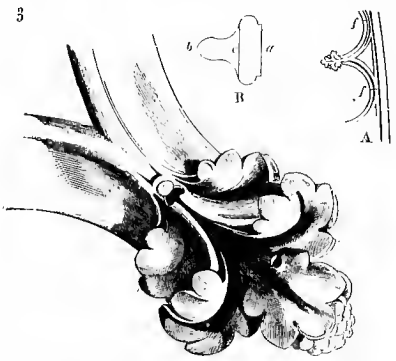
225—Upper balustrade of façade, Notre Dame, Paris. (From Viollet-le-Duc.)



226—Balustrade of south transept of Notre Dame, Paris, c. 1260. (From Viollet-le-Duc.)



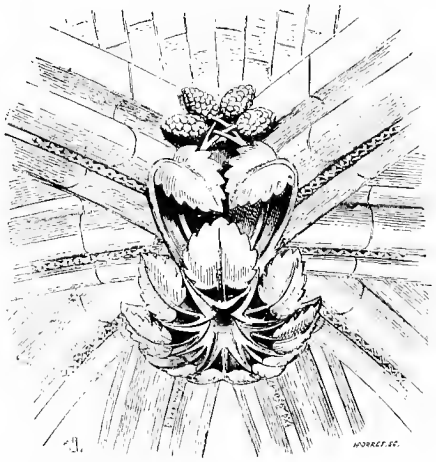
227—Profiles of larmiers. (From Viollet-le-Duc.)



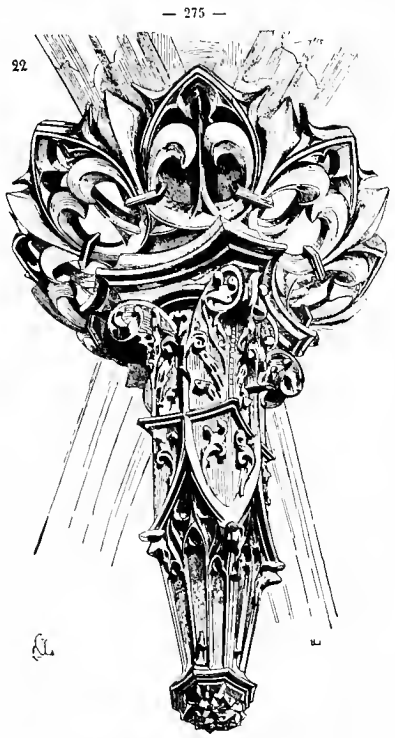
228—Cusp end of portal at cathedral of Amiens. (From Viollet-le-Duc.)

229—Finial of the cathedral of Troyes. (From Viollet-le-Duc.)

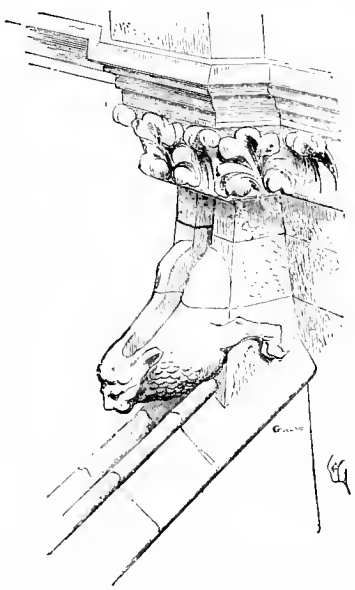
varied according to position, as can be seen in the types given in Fig. 227. To return to Plate II, the decorative cusp ends of the sexfoil and of the portals illustrate the objection to plain ends and exposed irregular joints in developed Gothic. This is illustrated in Fig. 228 from the same portal, and in the finial of Fig. 224, or more in detail in Fig. 229; also in the ever increasing richness of the key vaults, more or less pendant (Fig. 230), which became such a feature in Normandy (Fig. 231) and England. The turning to decorative account of a structural necessity involving jutting masonry is best illustrated in the gargoyles. The diagram in Fig. 232 and the two forms of gargoyles, the secondary gargoyle



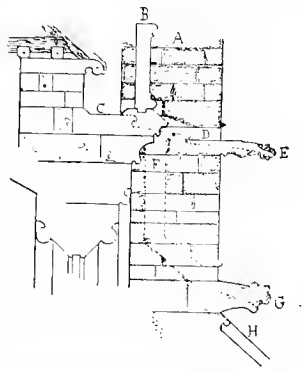
230—Key of vault in transept of cathedral of Laon. (From Viollet-le-Duc.)



231—Pendant of key of vault in choir at Eu. (From Viollet-le-Duc.)



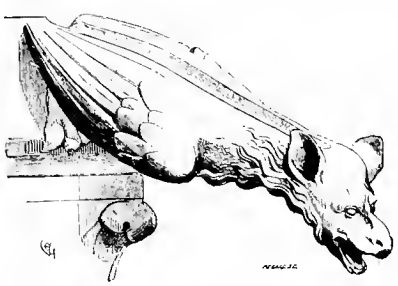
233—Gargoyle of cathedral of Amiens. (From Viollet-le-Duc.)



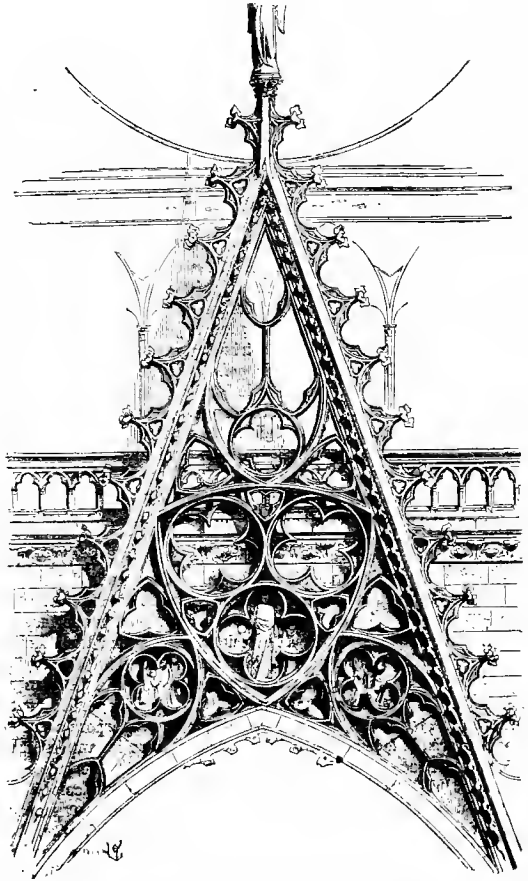
232—Conduits and gargoyles for discharging rain water from roof. (From Dehio.)

(Fig. 233) and the ultimate gargoyle (Fig. 234) will show how necessary this system was for the preservation of the structure, even the exact amount of projection being determined by practical considerations.

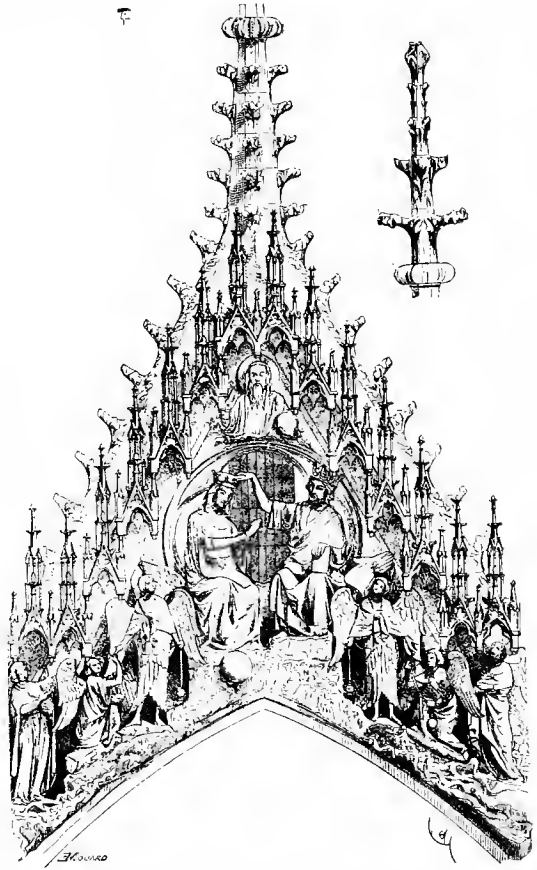
To return to Fig. 224 and its rather early form of a solid and only slightly decorated gable with the usual cusped edge, it is important to refer to the evolution of the decorative value of the gable and its transformation through tracery and more elongated pro-



234—Gargoyle of the Ste. Chapelle, Paris. (From Viollet-le-Duc.)

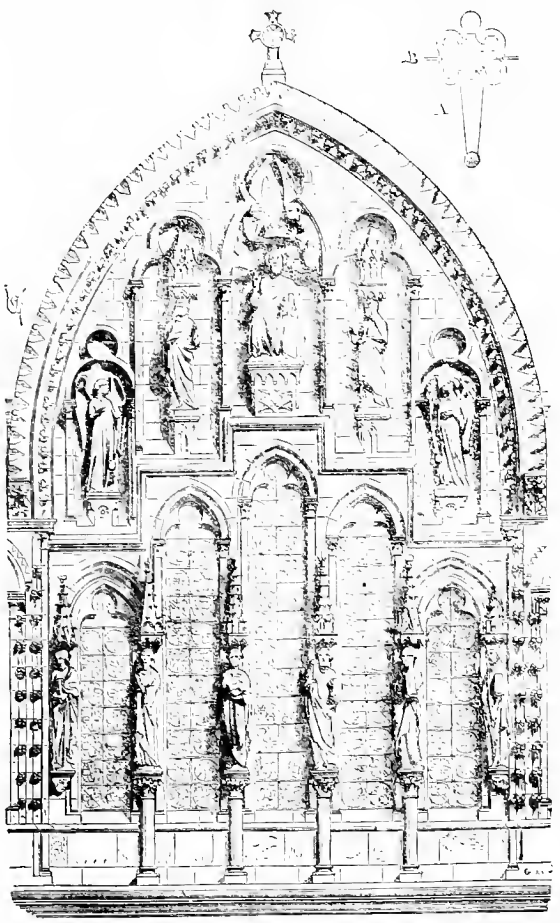


235—Late gable of Portail de la Calende, cathedral of Rouen. (From Viollet-le-Duc.)



236—Central gable, main façade of cathedral of Reims. (From Viollet-le-Duc.)

portions from the XIII to the XV century into such forms as the open gables of the cathedral of Reims in Fig. 235. The study of this transformation goes hand in hand with that of window tracery. In a few cases the enrichment was in the direction of the substitution of figures for tracery as in the charming Coronation of the Virgin in the central gable at Reims (Fig. 236), a late addition to the original design, with a fringe of tabernacles. This intrusion of figured work was felt occasionally in unexpected ways. For example, at Vézelay (Fig. 237), where the porch gable has not only statues between each light but distributed in the field above under false arcades. At Reims, again, the summer-stone between two portals of the west front shows as the base for a figure in a tabernacle a Pelion-upon-Ossa of caryatid figures over and under two other figures (Fig. 238). Heads as



237—Porch gable of church at Vézelay. (From Viollet-le-Duc.)

238—Summer-stone of west front, Reims cathedral. (From Viollet-le-Duc.)

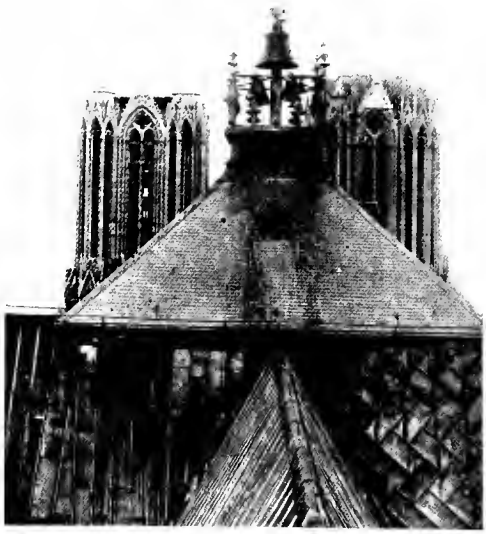
corbels were very common, as has been noted for Reims, but figures also were frequently used for foliage in the cul-de-lampe, as in Fig. 239 from Amiens. Sometimes, heads appear in a false arcading, as in

239—Cul-de-lampe from west portal of Amiens cathedral. (From Durand.)

239*a*—Decoration of south-west tower of cathedral, Reims. (From Demaison.)

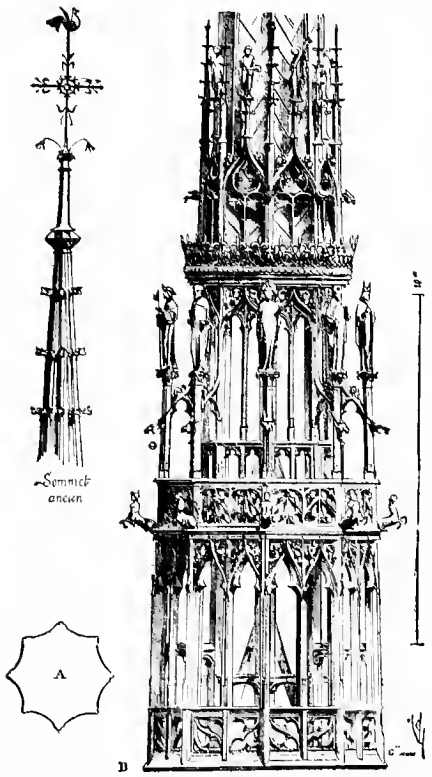
Fig. 239a, from Reims, a rather clumsy expedient which found favor in England and Spain.

Passing to the crowning parts of a typical cathedral, it must be

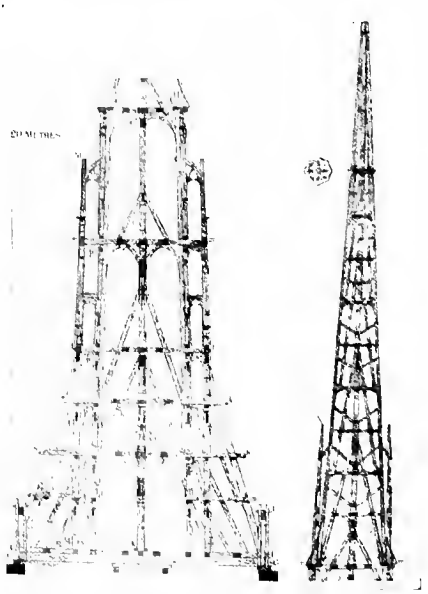


240—Roof of cathedral of Reims. (From Demaison.)

remembered that there were originally spires both at the façades and intersection as Viollet-le-Duc has restored at Reims, in Fig. 52, giving the wooden spires that were burned. Fig. 240 gives a view of the roof of Reims as it now is, and is interesting as showing also the extremely steep pitch of the main roof as well as the makeshift crowning of the towers. In this connection it is interesting to study Viollet-le-Duc's drawing in Fig. 241 of the central spire of Amiens with its very open tracery. Such a frame was probably unusual in France,



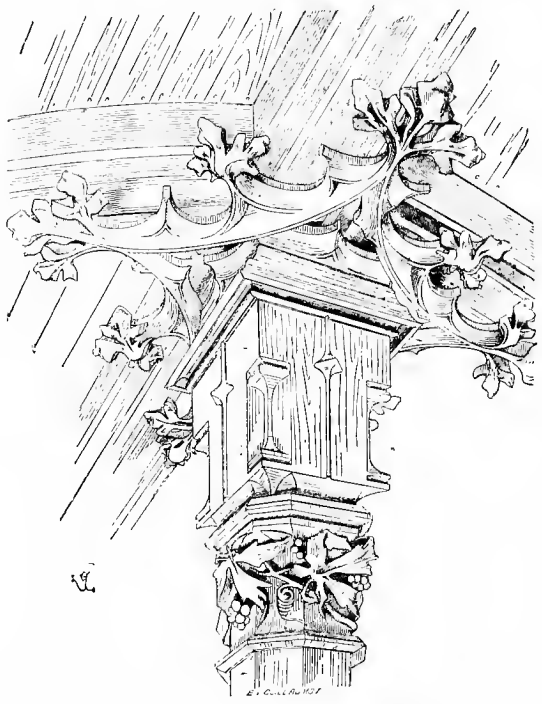
241—Central spire of Amiens cathedral. (From Viollet-le-Duc.)



241*a*—Frame of belfry of Amiens cathedral. (From Durand.)

where spires were usually rather plain and solid. The model of St. Maclou in Plate II was one of the rare cases where open work approaching the German type was attempted. Carved woodwork, sometimes used with a lead covering in such spires, was of course more frequent in inside decoration where, as in Fig. 242, it often imitated stone design, and was admirably used in monumental doors.

The study of the foliated capital has led us far afield through the various applications of the decorative scheme of French designers, and it now remains to study the more strictly structural details of the

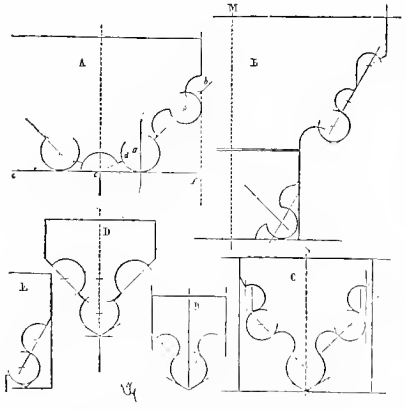


242—Norman wood key-pier. (From Viollet-le-Duc.)

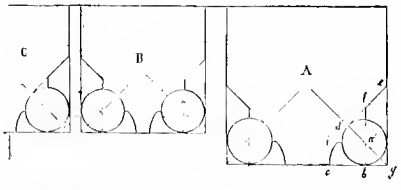
interior, as typified by the piers and their bases and the profiles of the vaulting and arches.

In the study of profiles it would be, of course, impossible to find the same excess of originality as in figured sculpture, tracery and foliated ornament. In Fig. 243, which gives the profiles of an early developed Gothic structure at Semur, we see the application of the same scheme to the various parts of the building: to vaulting ribs, arcs-doubleaux, cornices, etc. The simpler and earlier scheme of Notre Dame is given in Fig. 244. A clearer idea of the two schemes—a central projection, or lateral projections—is given in the set of sections given in Fig. 245, nearly all of which are early. A different system, with convex in place of concave surfaces between some of the mouldings, is illustrated from St. Urbain at Troyes in Fig. 246.

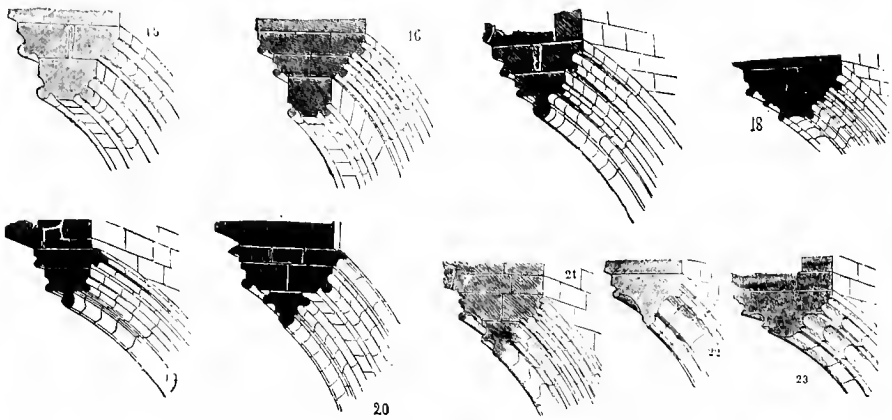
Passing now to the base of the column and pier, it becomes clear that the old Ionic base and plinth was soon to be modified and then



243—Profiles of church at Semur. (From Viollet-le-Duc.)

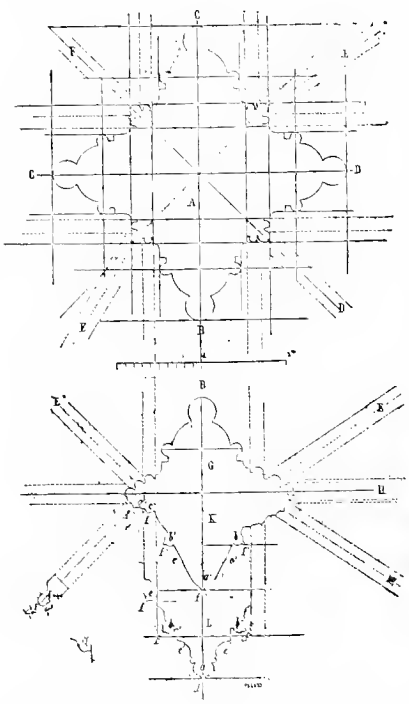


244—Vaulting profiles of Notre Dame, Paris. (From Viollet-le-Duc.)

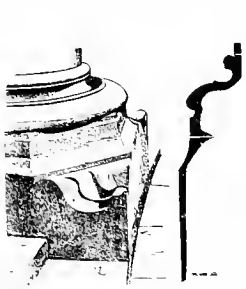


245—Types of profiles. (From Viollet-le-Duc.)

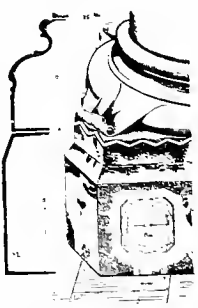
utterly transformed and obliterated. A good starting point for the two types is, for the columnar base, the ambulatory of St. Denis in Fig. 17, and for the pier the Romanesque base at St. Germer in Fig. 15, and both can be studied in Fig. 32 at Notre Dame. The square plinth was very early cut into by griffes at the four corners, as at Chartres (Fig. 247), so as to make an easy transition first to the octagon and then to the circle. Or else the lower part of the plinth was chamfered at the corners, as at Notre Dame (Fig. 248), so as to send the griffe up to form the transition from plinth to columnar base. There was at the



246—Prismatic pier at St. Urbain, Troyes. (From Viollet-le-Duc.)

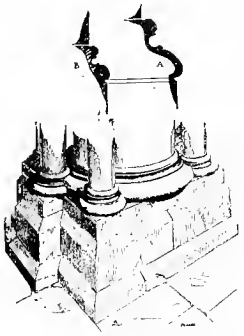


247 — Base in choir of Chartres cathedral. (From Viollet - le-Duc.)

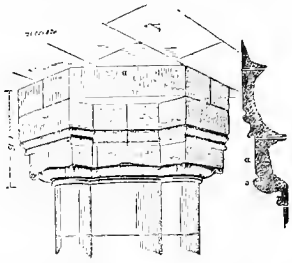


248—Base in choir of Notre Dame, Paris. (From Viollet-le-Duc.)

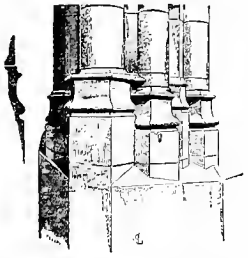
same time a hybrid form created for the pier with detached colonnettes around a central shaft: a crude makeshift (Fig. 249). The Anglo-Norman tendency to round plinths is illustrated at Coutances in Fig. 90. The orthodox pier



249—Base in cathedral of Laon. (From Viollet-le-Duc.)

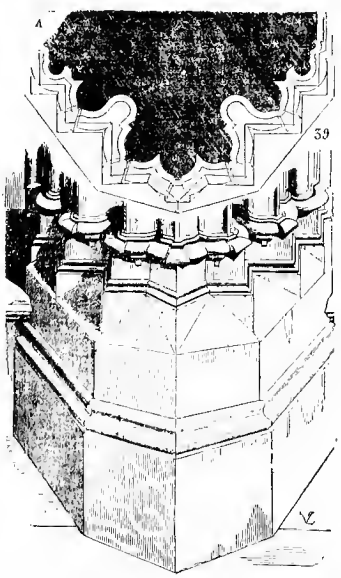


250—Base in nave of Reims cathedral. (From Viollet-le-Duc.)

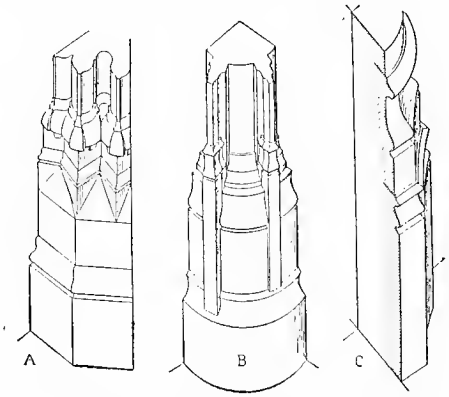


251—Base of pier at cathedral of Meaux. (From Viollet-le-Duc.)

with four engaged shafts created the base and plinth we see at Reims, in Fig. 250 (cf. Fig. 56 and Bourges, Fig. 42); but very soon the prevalence of the articulated pier of the type of St. Denis (Fig. 14) led to the necessity of a much more elaborate mode of transition from grouped shaft to plinth which obliterated every vestige of the traditional base. Beginning, for example, at Meaux (Fig. 251) and passing through the rich XIV century forms of St. Nazaire (Fig. 252) and St. Ouen at Rouen (Fig. 126), it ends in the complete fusion of base and plinth in the XV century (Fig. 253) with a totally different ratio of proportions as well as memberment.



252—Base of half-pier in choir of St. Nazaire, Carcassonne. (From Viollet-le-Duc.)



253—Fusion of base with plinth in XV century. (From Choisy.)

BOOK XI.—GOTHIC IN SOUTHERN EUROPE

CHAPTER I

GOTHIC IN SPAIN

SPANISH Gothic to be understood requires more historic sidelights than that of any other European nation. Otherwise the overmastering character of the French influence, the peculiar geographical distribution of the monuments, curious outcrops of Anglo-Norman peculiarities, the grouping of the earlier works in the north, the strange Moorish Gothic in the south, would all remain inexplicable. Toward the end of the Romanesque age, less than half of the peninsula, in the north, was in the hands of Christian rulers. Catalonia, Aragon and Navarre bordered on France across the Pyrenees. Castile and Leon extended along the northern and northeastern seaboard. The Moslems still held the rest of Spain, but were being continually driven south of the Tagus. In 1147 they were pushed beyond the Sierra Morena. In 1212 they were decisively defeated in the great battle of Navas de Tolosa: Cordova was taken in 1236 and Seville in 1248. After that the Mohammedan territory was confined to the kingdom of Granada. But this does not mean that Moorish artistic influence did not count. The superiority of Moslems over Christians in education, culture, and artistic training during the Middle Ages is undeniable. The artistic models in architecture and decoration by the Oriental race in the cities of central and southern Spain are responsible not only for certain elements in the Christian art of the Gothic age, but for the creation of a special late style which is called *Mudejar*, from the name given to the Moriscos or Spanish Moors.

Two distinct groups illustrate the transition in Spain: The Cistercian buildings and the cathedrals. Of course, there was more direct French influence in Spain than in any other country, quite irrespective of the monastic influx. There was a constant inroad of French

prelates and monks of Cluny occupying Spanish bishoprics; one of the most potent factors of this sort was that the French archbishop of Narbonne was the superior of the episcopal sees of Barcelona, Gerona and Urgel. Broadly speaking the French schools of Burgundy, and of the southwest, especially of Languedoc, had the strongest influence, though traces of almost every other school can be found.

At first, however, the Cistercian monks and nuns came into Spain from France in such numbers between 1135 and 1200, and erected so many large groups of buildings throughout northern Spain that they dominated the situation and made themselves felt in cathedral architecture as well.

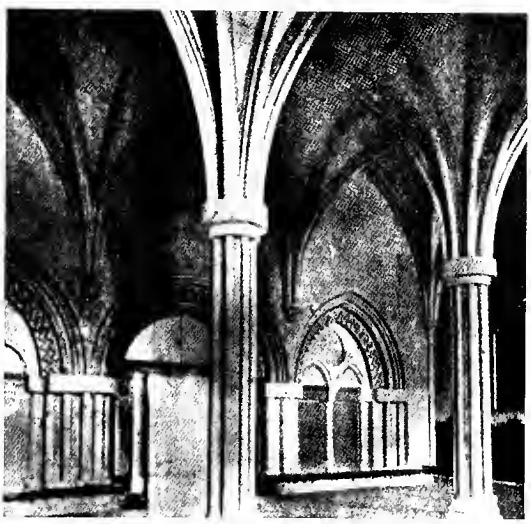
Near Zamora are the ruins of Moreruela, with an unusually large church, built in the Burgundian style between 1160 and 1170. It still has a tunnel-vaulted nave, but the choir with its seven radiating chapels and the slender shafts and ribbed vaults of its choir aisle correspond to French work of 1140–1150, with some very strange differences, especially in the lack of members to support the vaulting-ribs, which either rest on brackets or project clumsily from the wall; this is a peculiarity that recurs in other early buildings in Spain and Portugal, and not to be found, it would seem, in other countries in this form.

It is impossible not to mention the monastery of Poblet. It is true that the church has a barrel-vaulted nave and so hardly belongs here, but the whole group of structures attached to it—cloister, chapter house, refectory, dormitories, library—are in a unique state of preservation and illustrate the transitional style of the early thirteenth century. Bar tracery is well established in the cloister, though the old plate tracery persists in the lavatory. A wall fortified with towers surrounds the monastery and isolates it. There is no other monastery of this age in Europe so well preserved. It is called the Escurial of Aragon, as the early kings were buried in the church.

The church of the monastery of Veruela is on the whole an excellent example of early transition, with Romanesque piers, heavy vaulting ribs, single-light windows, but with a relatively delicate and advanced choir with ambulatory and five radiating chapels of pure early Gothic type. All the vaulting is thoroughly on Gothic principles. Veruela is in Aragon, in the northern part of Spain, where all these transitional monuments are found. Aragon soon became tributary to Catalonia in its architecture, recovering its independence in the fifteenth century.

More advanced is the mysterious monastery of Las Huelgas at

Burgos, now occupied by cloistered nuns and inaccessible. Quadripartite vaulting is used throughout, with heavy and acutely-pointed transverse arches. In the nave there is still insufficient memberment. Nothing but a single engaged shaft receives the vaulting ribs, so that the wall-ribs and diagonals coalesce and rise from a single corbel. But the advance is plain in the mouldings of the main arcades, the fine piers at the transept and the excellent foliage of the capitals. The details at the choir end seem to show the influence of the domical Angevin school. The lantern over the intersection has an octopartite domical ribbed vault which is exactly in the style of the French south-west. The vaulting of the chapels of the choir with delicate ribbing and domical surfaces shows the same origin. The rich and pure Gothic foliage used quite profusely on the doorways is so different from the usual Cistercian work that it would seem to show the presence of lay French artists. Here at Las Huelgas, especially in the apse, we find the sources for the more developed work at the cathedral in Burgos itself. The Anglo-Norman elements are prominent in this view of the capitulary hall of Las Huelgas (Fig. 254), with its Norman zig-zags on the archivolts, its plain circular moulded plinths and capitals, and the cylindrical piers with eight monolithic colonnettes. I am not prepared to say how much of this Anglo-Norman influence there was, but it seems to have been quite widespread at different times, especially just before and after 1200. Salisbury and Lincoln cathedrals and the type that led up to that like Beverley Minster were models. It betrays itself at Burgos cathedral in details such as the setting of the flying buttress directly against the nave wall instead of against a pilaster strip. This would certainly not have been done by a French architect or his pupils, but was current in England. There will be many other



254—Chapter-house of monastery of Las Huelgas. (From Lamperez.)

similarities of this kind to which attention will be called as they are met with because the importance of these similarities appears not to have been noted. It is nothing to be marvelled at. At this time a large section of France was as much a part of the English kingdom as England itself, and English territory extended uninterruptedly from the Channel to the Pyrenees. Beside this there were ties of blood and alliance. The marriage of King Alfonso III of Castile in 1170 to Princess Eleanor, daughter of Henry II of England, was artistically important (e.g., in the founding by her of Las Huelgas monastery), and inaugurated a long and close intimacy.

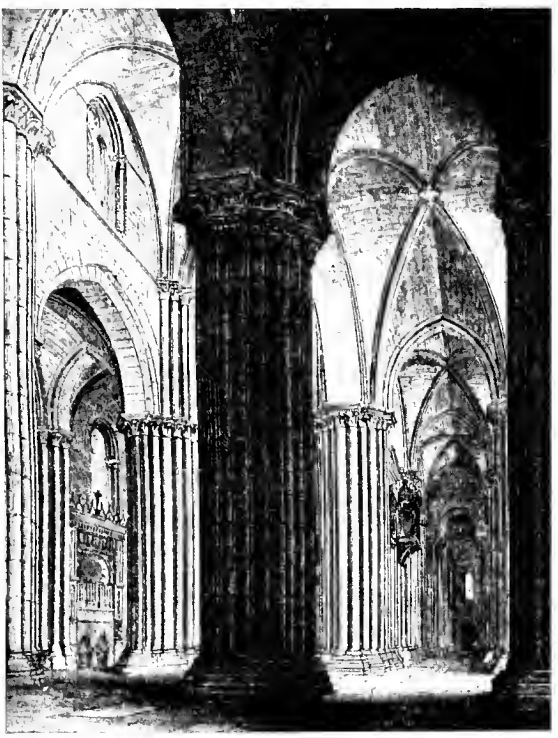
The monastery of Fitero in Navarre, though very little known, is among the largest of the Cistercian establishments and has the most developed choir-design of any church of the transition. The ambulatory of the choir has four piers of a very curious shape; a circular shaft in which a group of three small shafts is engaged on the side facing the nave. The vaulting is throughout quadripartite and ribbed, but the crude way in which the diagonal ribs are made to rest on corbels that project very awkwardly from the wall shows a native and not a Burgundian designer, as has already been noted. Transitional architecture is also found in the monastic buildings of S. Cueufate, of Hirashe and others.

The military orders built several interesting churches of transitional and early style. For instance, S. Maria of Villasirga and the present parish church of Villamuriel, both near Palencia, are of a peculiarly noble simplicity, which connects them with the more advanced Cistercian work.

The group of cathedral churches that corresponds to those just described is well represented by Salamanca, Lerida, Zamora, Avila (transept), Tudela, Siguenza, Tarragona and Cuença. There was in these buildings greater variety and more innate possibilities for development than in the monastic group.

Some of these churches illustrate in the course of their construction the changes in style that were going on. This is especially true of Siguenza (1184–1191). Its façade is an instance of a military style as characteristic as the apse of Avila cathedral is of the fortification of the apsidal end. The heavy towers at each side take the place of spires, and the façade extends in a straight line between and was originally battlemented like them. The military air is continued by the two heavy buttresses. In the interior we must eliminate the choir

which is largely a modern work completed in 1606 (Fig. 255). The use of the sexpartite vaulting in the transept is one of the very few instances of this form of vault in Spain. The body of the church, though consisting of only four bays and the transept, is imposing and effective on account of the massive, highly articulated piers and the relatively high vaulting of the aisles. In this entire group of transitional works we are impressed by the ability of the Spanish architect to give the feeling of size and grandeur. In this he surpasses all other



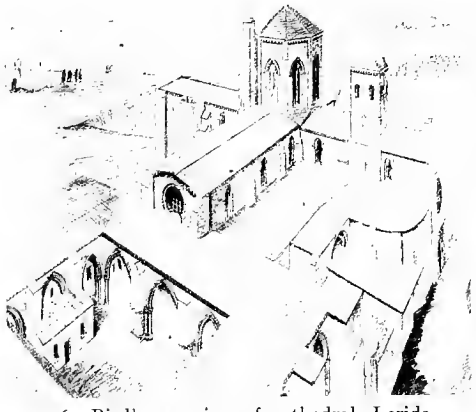
255—Interior of cathedral, Siguenza. (From Street.)

nationalities. The scheme of façade we see here, with flanking towers projecting beyond the body of the church both on the sides and in front, is peculiarly Anglo-Norman (e.g., Cath. Rouen), and was one of the most marked peculiarities of this school adopted in Spain.

At Zamora the exterior of the cathedral is an uninteresting patchwork, with some of the original work left in the doorways. But the interior is not only in excellent if somewhat heavy transitional style, but has the advantage of a certain date; it was built between 1151 and

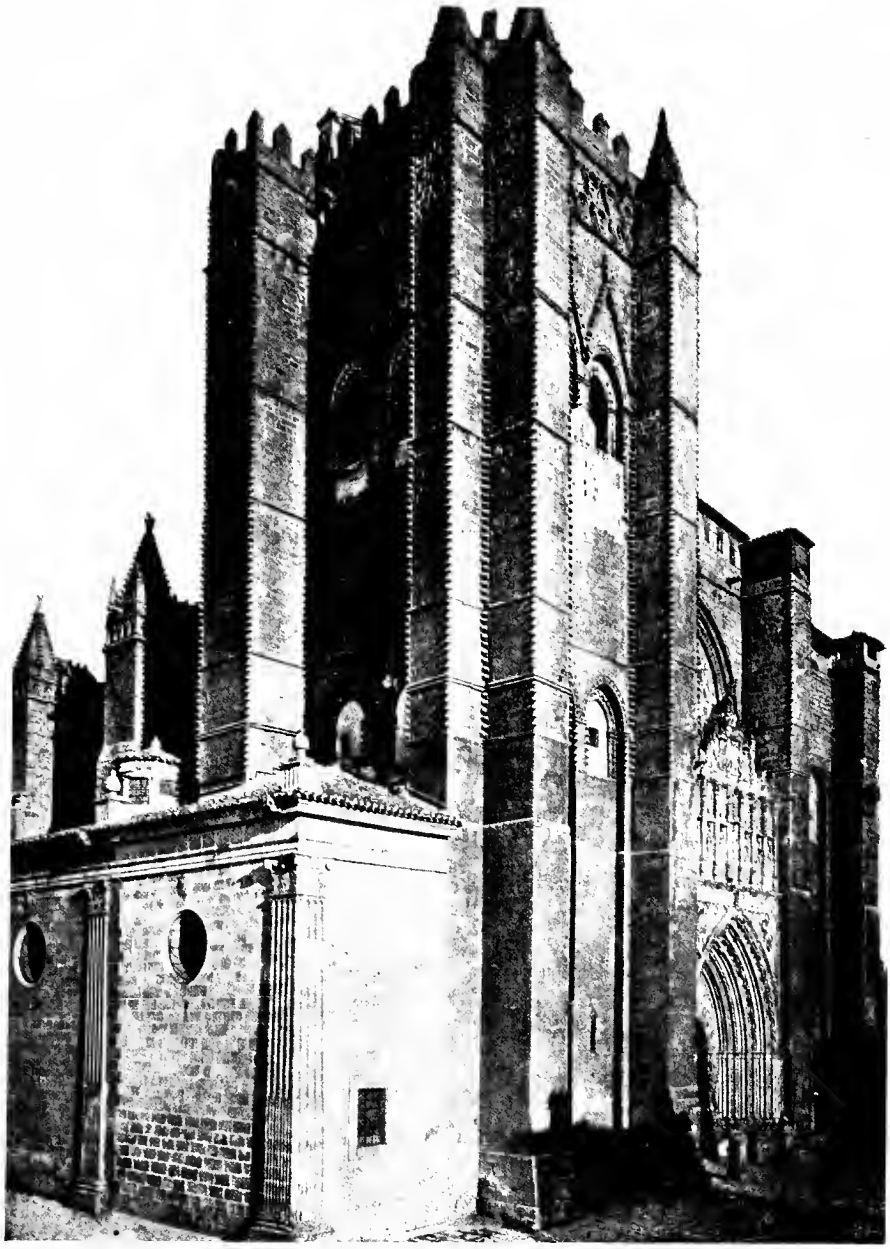
1174. With this very early date it is not surprising that it is the heaviest of the transitional structures, with a nave hardly more than three times (23 ft.) the width of the piers (7 ft.). Only the nave has ribbed vaults; those of the aisles are groined.

The scheme of the cathedral of Lerida and its dependencies is unusual, as the west end is largely masked by the immense cloister, which plays here the part of the atrium in the Christian basilica. Street's bird's-eye view (Fig. 256) is the only one that would give any idea of the internal arrangement, though it does not include the octagonal steeple addorsed to the front right-hand angle of the cloister. This tower, 170 feet high, in five stories, is one of the finest of its class in Spain and quite national in type. The most advanced work is on the *cimborio* over the intersection. The rest is of twelfth century design though not actually begun until 1203. It has been a military barracks for two centuries, ever since the building of the new cathedral, and has been so cut up and disfigured that it requires an effort to resurrect its original form.



256—Bird's-eye view of cathedral, Lerida. (From Street.)

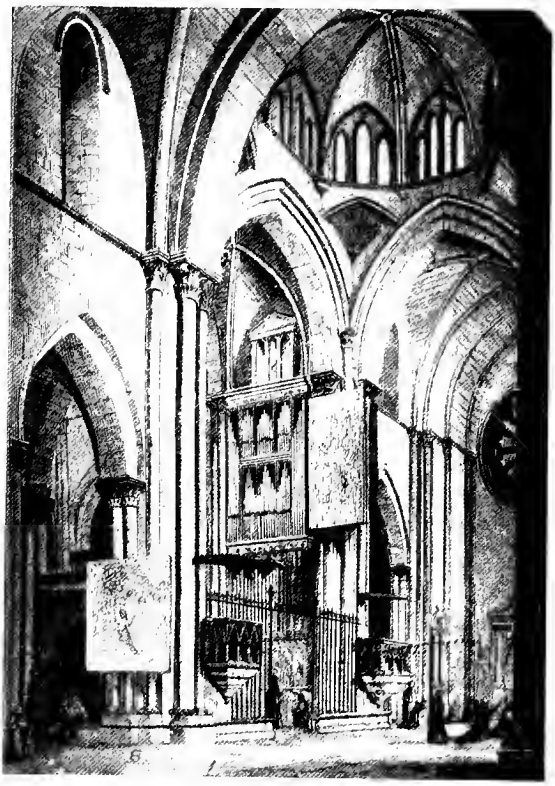
At Tarragona the cathedral is, by general consent, reckoned among the noblest works of Spanish medieval art. The visitor who approaches its west front, obtains the impression of a design of the Middle Gothic period in the broad type (Fig. 257), of which the Spaniards were masters, giving an idea of imposing size with relatively small dimensions. This façade was begun in 1278, with an enormous richly carved portal surmounted by a rose-window. By reducing the French elements in a façade to these two important features, the Spanish architect secured an effective design. An examination of the geometrical tracery of the window, evidently of the fourteenth century, shows it to be later than the portal, where the simple, well-designed, sturdy figures correspond to French work of c. 1230–1250. As soon as we examine the walls on either side of the projection of the central portal, it is evident that the two round-arched doors, of Romanesque simplicity,



257—Façade of cathedral of Tarragona. (From Junghändel.)

leading into the aisles are of much earlier date. This prepares us for the effect of the interior, which is the most satisfying of the transitional group. But before studying it, a few words about certain

curious features of the exterior. Beside the central *cimborio*, which will be referred to later, there is an octagonal tower on a square base rising from the choir-aisle at its intersection with the transept. The presence of this tower is a Spanish peculiarity. It appears as if Spain never thoroughly adopted the French scheme of twin façade towers, but was almost as partial as Italy to the single and relatively independent tower, usually connected with the transept or choir. The octagonal was preferred to the square plan.

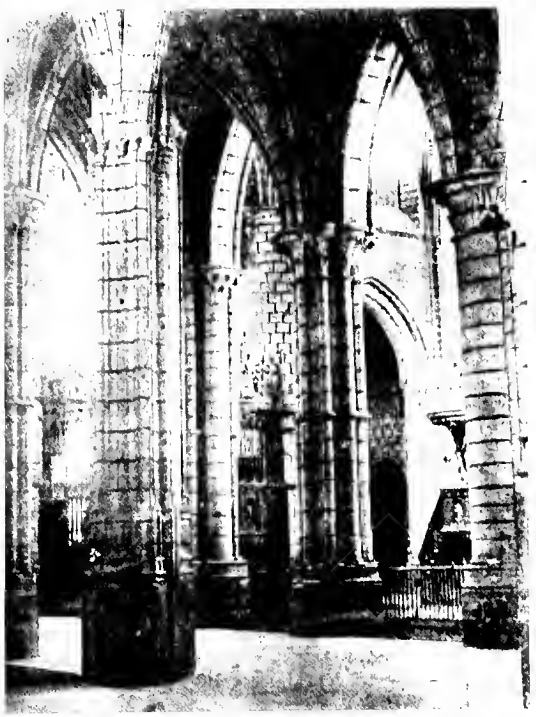


258—Interior of old cathedral, Tarragona, at transept. (From Street.)

In connection with the lantern over the intersection at Tarragona (Fig. 258), of which I regret not giving an exterior view, with its low buttressed single-story octagon, it will be instructive to study others of this group, which is peculiarly Spanish. The groups of lancet windows as well as the flying buttresses at Tarragona show the transformation into a pure early Gothic form, corresponding, for instance, to that of Coutances in Normandy, of the transitional Romanesque scheme so well shown in the Salamanca lantern, Vol. II (Fig. 366). The roof of this Tarragona lantern was never finished. Was it to be a low roof? The lantern at Lerida, of about the same date, has such a stone roof. On the other hand the later lantern of the cathedral at Valencia is equally unfinished.

At Cuença, in New Castile, is a cathedral of unique character, the church in Spain which illustrates most fully Anglo-Norman influence of transitional type. In the transept there is the alternation of columns and piers; here and in the apse and nave the vaulting is sexpartite.

Nowhere else do we find these two peculiarities. Another indication is the peculiar form of some of the composite piers with cylindrical core and slender engaged and banded shafts of purely English type, as, for instance, at Lincoln. The choir and transept were completed in 1208; the nave was later, though before 1250, and shows developed Gothic details. The most original feature of the nave is the triforium-clearstory combination, which is an adaptation of an English peculiarity due to the low vaults of the nave. Either clearstory or triforium must be sacrificed. The architect made a narrow vaulted passage or gallery with a parapet flush with the face of the inner wall of the nave. Then the entire space under the wall ribs of the vault is occupied by a wide pointed arch enclosing two cusped arcades surmounted by a large oculus. The wall opposite the oculus was pierced with a traceried oculus-window of corresponding size. This amount of light would hardly have been considered sufficient further north. The effect of the angel caryatids which take the place of central colonnettes is marred by the parapet which is a late addition (Fig. 259).

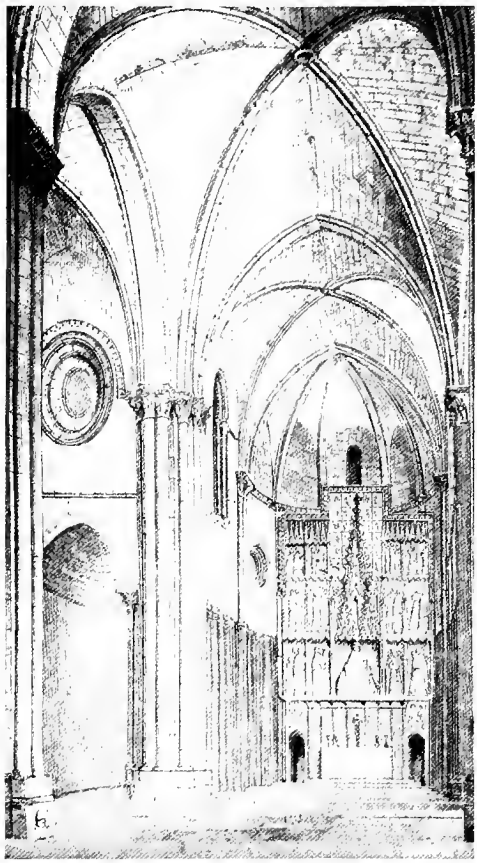


250—Interior of cathedral, Cuença, at transept. (From Lamperez.)

In this transitional group the most advanced is the cathedral or collegiate church of Tudela, in Navarre. In plan it is almost identical with Lerida, but it differs from both Lerida and Tarragona in having no *cimborio*. The consecration in 1204 gives its approximate date. One of the novel features—used here perhaps for the first time, is the group of triple windows in the transept, with a higher central window. They are lancets and seem due to English influence. They evidently herald the introduction of tracery (Fig. 260). Another form of transition

with domical vaulting of Aquitanian type is the cathedral of Ciudad Rodrigo.

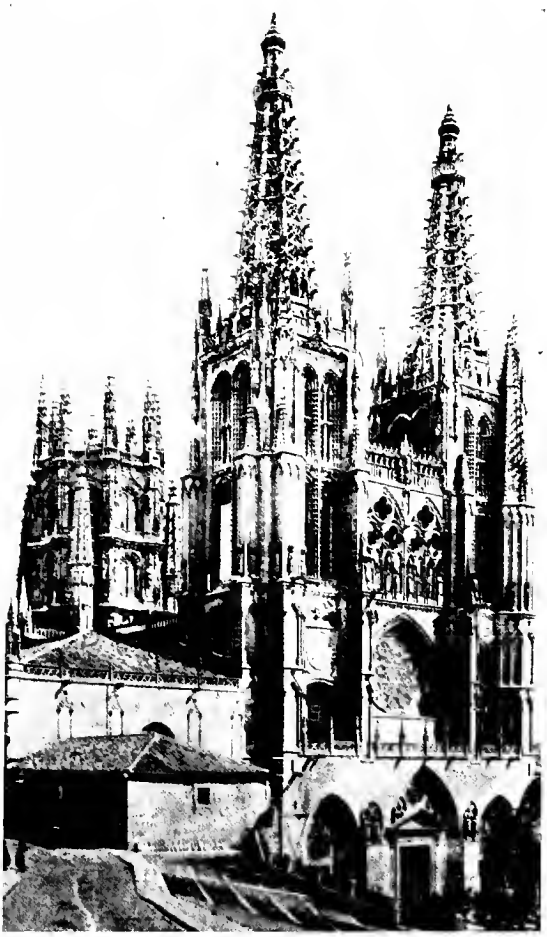
This brings us to the beginning of developed Gothic work after 1200. Burgos, Leon and Toledo cathedrals mark the several stages through which pure Gothic passed in Spain during the thirteenth century and form what Lamperez calls the Spanish Cathedral trinity, or, better still, trilogy. They equal the best French work in everything but design. It remains even a question whether they were not wholly or in part the design and handiwork of French artists.



260—Tudela Cathedral: interior at transept. (From Street.)

The cathedral of Burgos was begun c.1221, a few years after Reims and Amiens. The design of the façade (Fig. 261) is French: a development of the Laon and Notre Dame schemes. It is one of the few in Spain that follow such a cosmopolitan design, because Spanish façades have either been transformed or were conceived on peculiarly national lines, as, for instance, with enormous addorsed towers or entirely without towers. Still, the façade has suffered drastically. The triple portals with the common Spanish projection were mutilated in the eighteenth century, losing the greater part of their statuary. The second story is purely French, with a fine rose-window under a pointed arch in the center: the addition of a clock mutilated the left flanking arch. The masking double arcade above this story and the towers are later than the thirteenth century. In fact the open spires are the work of a German architect, Juan de Colonia, who

began them in 1442, in the style then fashionable in Germany. The flamboyant *cimborio* over the intersection is even later (after 1539). Both towers and cimborio are among the more important of their class and will be referred to later. The original richness of the triple west portal can be understood by a study of the portals of the tran-

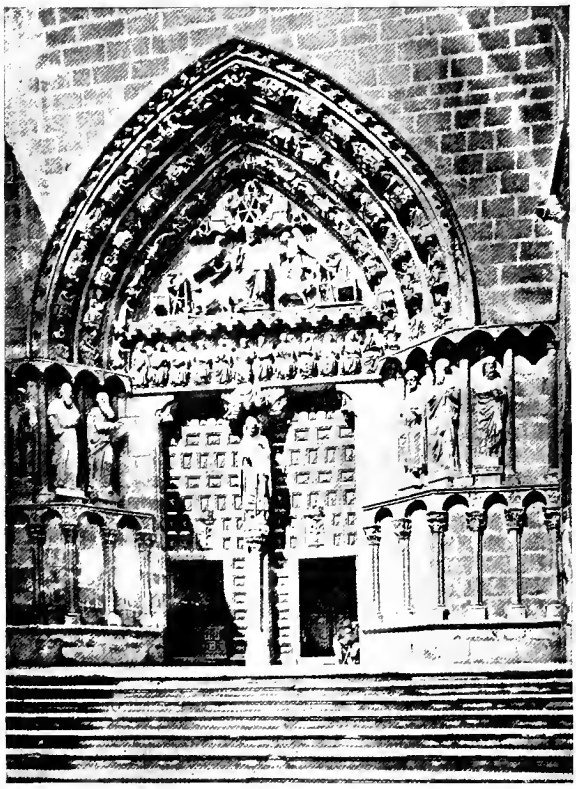


201—Burgos Cathedral. (From Uhde.)

septs, especially that of the north transept, called *Puerta do Sarmental*, which resembles (Fig. 262) French work. This entire transept façade is excellently preserved thirteenth century work. The cloisters are of the same date and have several richly decorated portals. In the annexes and chapels one can, in fact, see embodied nearly every stage

in architectural development in Castile until the late Renaissance, with a profusion of excellent decorative detail, some of it German and Flemish. The plan is French, obscured by accretions, which have changed the original chapels of the chevet, which was wider than the nave.

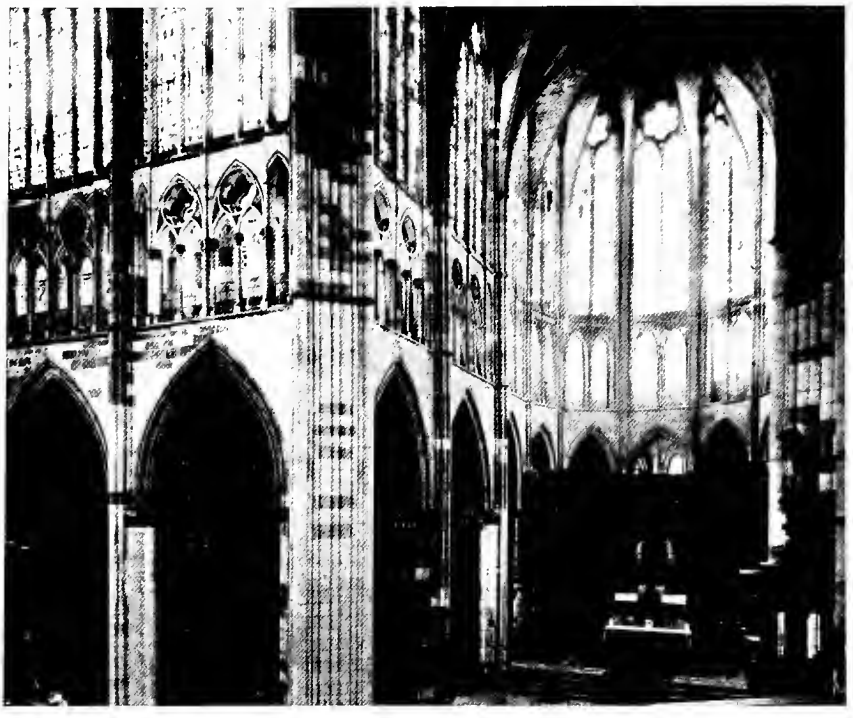
In the view of the interior in Fig. 263, which is extremely spectacular, we can see almost nothing but the *cimborio* and its neighboring vaults, a reconstruction of the latest Gothic of the sixteenth century. The enormous circular piers of the crossing are part of this new work. But on the left is the original scheme which remains everywhere else in the body of the church. The most radical difference from previous churches is the fine triforium with its group of five arcades. There had been no triforium in previous churches, the other early examples at Cuença and Tarazona, while earlier in design were either contemporary or later in their execution. The curious line of heads decorating the enclosing label is peculiarly Spanish. The details of the original interior were otherwise extremely simple. The pier, with its eight engaged shafts, varies from the normal contemporary French type and is also much shorter, but it is logical in its memberment. The clearstory is fairly well developed, but has not attained to the entire width of the bay. The proportions are broader and lower than in France, and are lacking in vertical effect. In fact, it is evident that



262—Puerta do Sarmental of north transept, cathedral of Burgos. (From Uhde.)

263—Burgos Cathedral: interior, near transept. (From Uhde.)

while the architect has thoroughly mastered Gothic principles (except in such details as the omission of buttress pilasters on the nave wall), he was certainly not a Frenchman, as has so often been suggested, but a Spaniard. The use of the ridge-rib in the main vault would show, in fact, a trace of English influence.

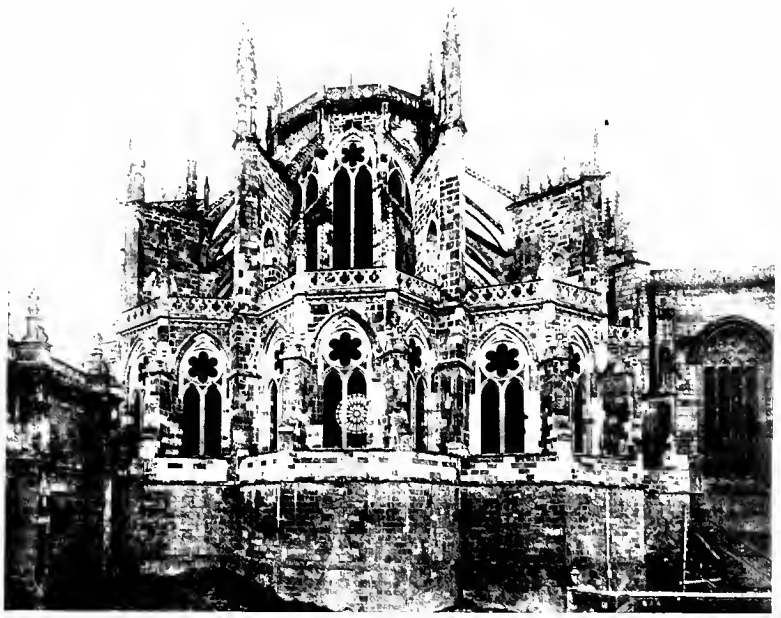


264—Leon: interior of cathedral at transept. (From Lamperez.)

It is generally acknowledged that the cathedral of Leon is the most perfect Gothic church in Spain. It was begun before 1204 and was practically completed in 1303, except for the two towers flanking the façade and some exterior details. It has been suggested that these towers placed in advance of the façade line and independent of it which are heavy, semi-military and quite distinct in style from the rest of the building, were not part of the original plan. But a comparison with the earlier façade of Siguenza and its strictly military towers shows how the Leon type originated and that its antecedents were Anglo-Norman. Otherwise the exterior is logical and symmetrical. There is no other large Spanish church where the side-aisles are kept

as low, after the fashion of the Ile-de-France, Champagne, etc. Nor is there any other where the clearstory windows occupy the entire wall space between the piers, and receive so splendid a height (Fig. 264).

There are many similarities to Burgos. The design of the projecting tower part of the west front is the same and the well-preserved sculpture of the three portals at Leon show what the effect was at Burgos. But there is the substitution of the lancets in place of buttresses between the portals—an English touch. Also there is the insertion of a rich low story of four windows under the rose which shows that the Leon design is somewhat more developed than that of Burgos.



205—Leon Cathedral: view of apse. (From Junghändel.)

A glance at the façade of Coutances, where a flat balustrade crowns the triple portico, will, I think, suggest an Anglo-Norman origin for this feature also. See Fig. 93.

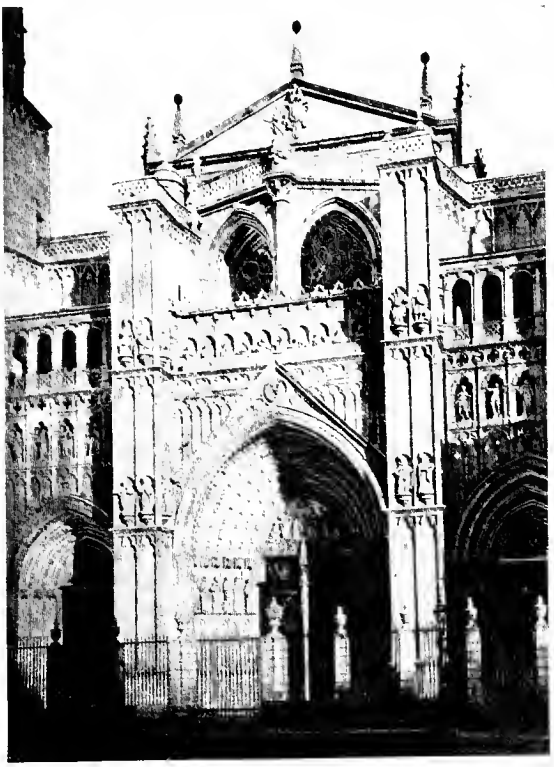
In its plan Leon has had the good fortune to escape the addition of late Gothic chapels, so that we can see that it had the same arrangement of five large polygonal and two small square chapels (Fig. 265), as in France. In its five-bayed nave with single aisles, its broad aisled transept and its double-aisled choir, its blind triforium duplicates

French models. The vaults are more oblong than at Burgos and without the heavy ridge rib. There is considerable good thirteenth and fourteenth century glass in the clearstory, which helps to make of this the most exquisite and soaring of all Spanish Gothic interiors.

266—Toledo Cathedral: general view from west. (From Uhde.)

The French filiation is just as clear in the cathedral of Toledo, which, as Dehio has well said, is derived from Bourges through Le Mans. Founded in 1227, its design is sufficiently different from its French models to give it a national Spanish character of the Castilian school. It stands on the same level as the French masterpieces. In area it exceeds them all, owing to its great width of 178 feet compared with, say, the 110 feet of Notre Dame and the approximately 100 feet of Chartres or Amiens. The width of its nave is practically the same as theirs (c. 50 feet). In Spain itself it is exceeded only by Seville and beyond the Pyrenees by Milan. The exterior (Fig. 266) is much altered. Its imposing North tower has a late Gothic spire which is one of the best in Spain. The façade is a mixture of Gothic and Renaissance which can be studied (Fig. 267) in the portals. The plan is of five aisles throughout, without projecting transept as at Bourges. The original small radiating chapels of the choir have been largely altered, and this is the main change. There is none of the expanse of wall surface that we shall see in the Catalan school. The six-light windows of the clearstory are the most gorgeous in Spain and,

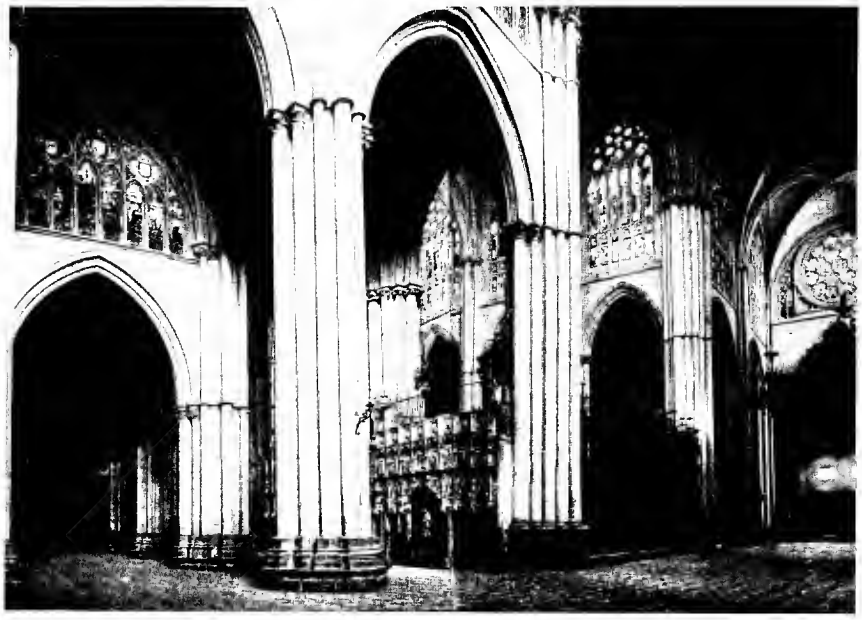
contrary to later Spanish usage, the windows of aisles and chapels are made as wide as the space allows. The tracery and the mouldings (Fig. 268) are thoroughly French until the upper part of the church is reached. Why, then, are we given an impression so radically different from that conveyed by corresponding French interiors? There is so much less spring, so much greater ponderosity. There seem to be three main reasons: the heaviness of the compound piers; the lowness of the central nave; the low, broad profile of the vaulting arches. The absence of triforium, except in the choir, is due to the low nave. Of course one may attribute these facts to a lesser degree of confidence in the strength of the new system of thrusts. A cross-section with its heavy buttresses and piers and double buttresses shows great conservatism. But beyond this there seems also to be a certain æsthetic trait in the Spanish character which shows itself in practically all buildings which are not absolutely dominated by foreign methods. I mean, a certain love of material grandeur that shows in an excellent use of masses both in themselves and in compositions. A lyrical admirer of Gothic would say that there was a lack of the soaring, the aspiring element so characteristic of French work and corresponding to the scintillating brilliancy of the Gallic race. In Spanish architecture—except for the Catalan school—this sentimental critic would see an expression of the dignified and slow but sometimes florid Spaniard: a scientist might say that Spain represented statics and France dynamics. Any mod-



267—Toledo: portals of cathedral. (From photo.)

ern architect who wishes for inspiration in such Gothic types can find in Spain more splendid models than anywhere in Europe.

There is a small cathedral at Burgo de Osma, begun in 1232, which is of pure French style also in its details, and in this particular excels even Burgos, which is supposed to have been its model. While this dependence may appear in such features as the S. portal which recalls the Puerta do Sarmental at Burgos, the treatment of details seems to show direct French handling. The aisles are low, the piers cylindrical,



268—Toledo Cathedral: interior at transept. (From Michel.)

and the plan Cistercian. The use of corbels for diagonal and wall ribs is exceedingly well managed and some of the profiles recall Amiens.

Another of the smaller churches is the cathedral at Palencia which both stylistically and topographically stands midway between Burgos and Leon, and is less pure than either. When the church was lengthened in the fifteenth century the nave was reconstructed so that only the choir and one bay beyond the chapels remain of the original work. The most beautiful feature is the triforium with its blind gallery.

All these works belong to the earliest of the provincial schools, the school of Castile, which includes also such neighboring provinces

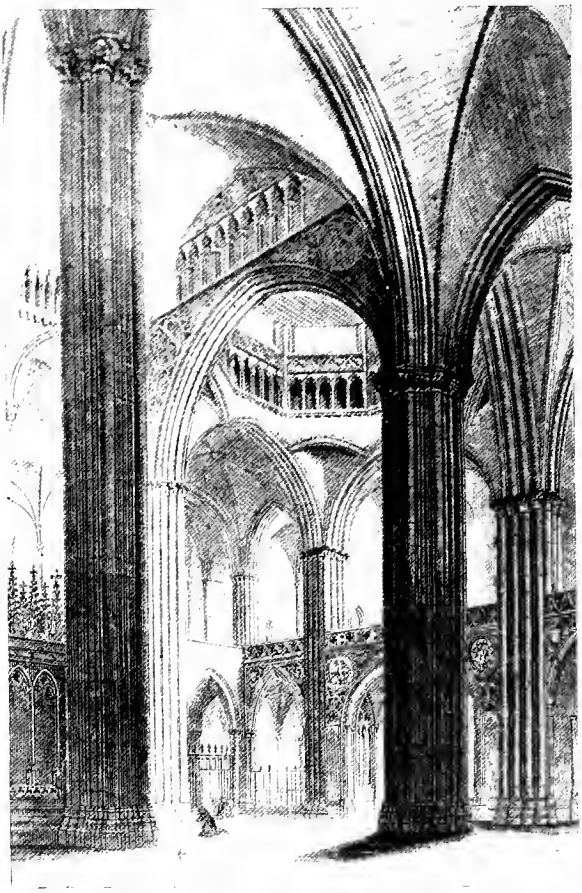
as Leon. The earliest deviations from the French and Cistercian models showed themselves here.

In speaking of Veruela, the dependence of Aragon on the Catalan style was noted. As Veruela represented the transition, Rueda monastery and church are examples of the primary Gothic type in Aragon. But the Cathedral of Tarazona is the best example in the province of a church of the northern French type of early Gothic. Its date is 1235 and its French characteristics comprise a concentric choir with deambulatory, triforium, cylindrical piers with engaged shafts flying buttresses and transept. The piers of the deambulatory are rhomboidal. The main piers are extremely heavy and appear still more so because they are shortened to allow for the triforium, which is absent in other late transitional churches. The choir follows the Bourges-Notre Dame type, and the model slightly antedates 1200. The double lancet lights with oculus under an enclosing arch help to date the type just before the introduction of plate tracery; this is in the east transept.

The second really distinctive provincial school is that of Catalonia, with its capital at Barcelona. This province had its share of the Cistercian transitional monasteries, especially those of Poblet and Santa Creus, and also of the transitional cathedrals, at Tarragona and Lerida; but there were then no traces of a local style. This first shows itself in the cathedral of Barcelona, begun in 1298. It developed during the fourteenth century. Two foreign influences are evident, that of the French southern school of Languedoc and that of Italy, through the Franciscan monks and commercial relations. The one great architect who moulded the style seems to have been Jaime Fabre, a native of Majorca, so that it is not strange that the churches and buildings of Palma, the capital of this island, should be almost as important as those on the mainland. It is possible, though not proven, that Fabre gave the designs for the cathedrals of Barcelona and Palma as well as for other churches (e. g., Dominican church, Palma).

The cathedral of Barcelona is a work of striking originality. It does not have its full effect because it was never completed. The façade was not built until 1887–90. The feature of the external grouping would have been the two octagonal towers at the transept which together with the big lantern or cimborio over the nave at the entrance formed a group of three towers. This cimborio was never completed but it marks a return to national methods. The architect probably placed it in this unusual position because if it were to be set at the intersection

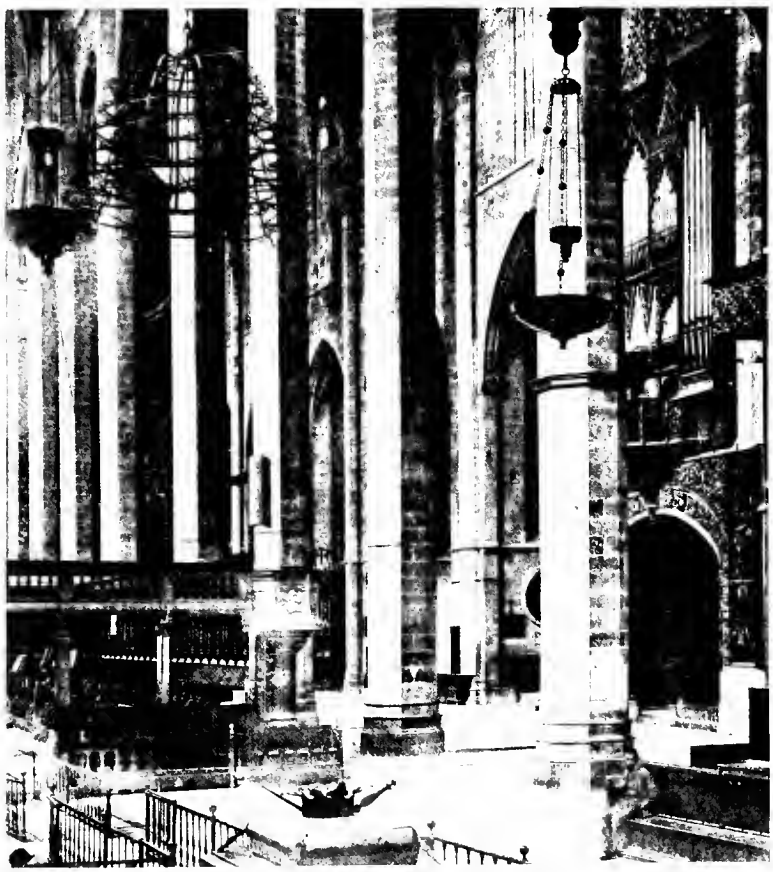
it would have been too close to the smaller towers. With his sense for mass the Spanish architect avoided this error. The originality of the interior is more obvious, since it was thoroughly carried out. The effect is of a hall church with widely spaced highly articulated piers, but instead of the usual chapels, two for each bay, with a solid wall above them, the chapels are surmounted by a high open gallery framed by an arch and with a pair of pointed arcades framing the clearstory windows halfway across the gallery. I do not remember this arrangement in any other building. In this composition there was an unusual opportunity for decorative detail in moulding, false arcades, parapets, etc., and this makes the absolute nudity the more striking. It is as consistent as if the building were Cistercian. At the same time the effect, especially at the intersection, as shown in Fig. 269, is undeniably grandiose in a way that connects it with the far heavier early work at Tarragona. The architect threw his influence here against the French type of immense clearstories which had obtained at Leon and Toledo. His windows are symmetrical and with good tracery but they cover only a fraction of the wall-space. It was the natural reaction of the south land that objects to overmuch light and heat. Henceforth Spain was to be very moderate in her clearstories. It must be granted



269—Barcelona Cathedral: interior. (From Street.)

that in this case, at any rate, the effect is successful. As usual an appearance of great size is secured.

The greatest difference in the Cathedral of Palma is the choir—an uninteresting square-ending apse. The body of the church, however, is similar in its scheme: a hall-church with lofty side-aisles and very slender high piers. But here the piers are of the octagonal type



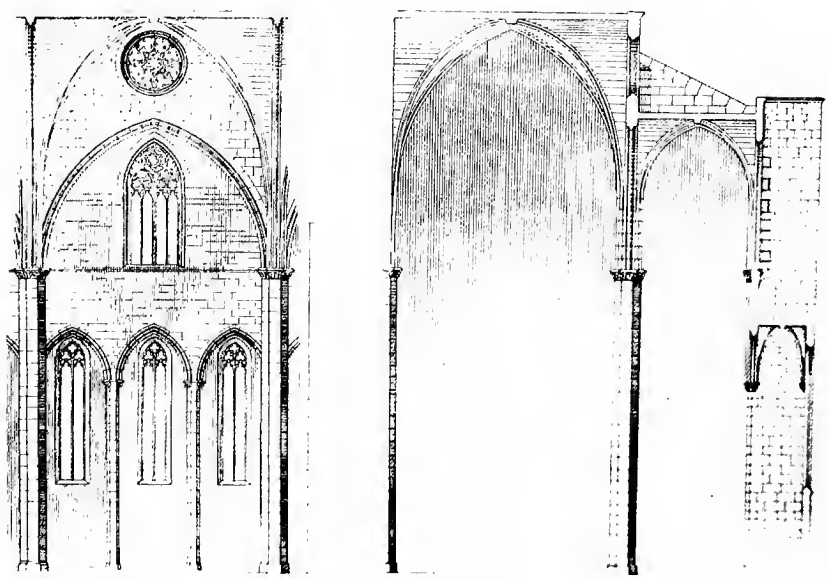
270—Palma Cathedral: interior from aisle. (From "Majorque.")

familiar in Italian Gothic—though Italian architects never made any so slender (Fig. 270). By the close spacing of these piers and the absence of memberment and capitals the effect is absolutely different from that of Barcelona.

There is a curious deviation from the normal Catalan type in the cathedral at Manresa, begun in 1328. The elevation shows the Franco-Castilian proportions of low aisles, with the consequent

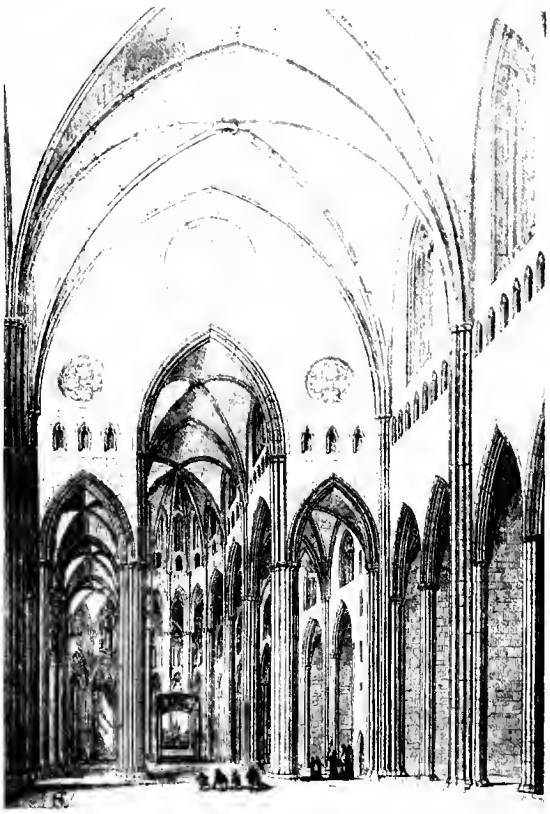
flying buttresses, but without triforium. The disproportionate width of the nave (18.30 met.) is Catalan. In the buttress piers there is a compromise between the two types, because they project both externally and internally. The mode of treating the internal projection is well-nigh unique. It was too slight to make it possible to build chapels entirely between these projections, so chapels and aisle were covered by a single line of vaulting, the like of which is to be seen only in the smaller church at Villena. Another noticeable peculiarity is the form of the piers similar to those at Palma. They are of simple octagonal plan, of a type common in Italy, though also found in Languedoc.

The next year, 1329, saw the beginning of the most symmetrical and representative of the Catalan churches, S. Maria del Mar at Barcelona, in which the style that originated in the cathedrals of Barcelona and Palma was carried to its ultimate conclusion in simple and arid slimness. The aisle vaulting is raised and the piers are made so slender that the effect of a hall church is accentuated to such an extent that one hardly realizes the plan to be three-aisled. This can readily be seen by a comparison between Fig. 271 and the interiors of Barcelona and Palma. The vaulting is stilted, the triforium suppressed, the



271—Barcelona: section and bay of S. Maria del Mar. (From Dehio.)

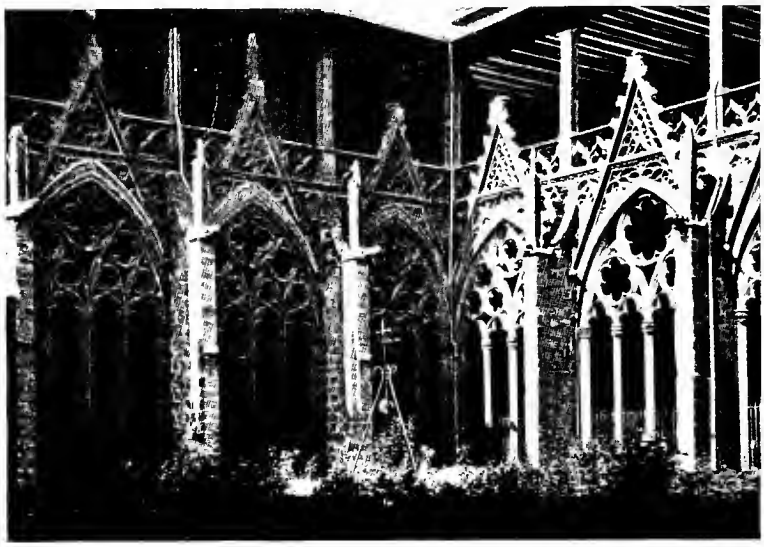
chapel arcades lightened and increased to three in each bay. All the piers are of the Italian octagonal type. Of course, one sees in an interior of this type the greatest similarity to churches of the south of France of the single nave type, such as the cathedral of Albi and the Cordeliers at Toulouse, and this prepares us for the splendid interior of Gerona.



272—Gerona Cathedral: interior. (From Street.)

At Gerona the cathedral is distinctly in two styles and periods. The choir was added to an old Romanesque nave (1316–1346), and is frankly French, built mainly by the architects Henri and Jacques de Favary, both of Narbonne. In (Fig. 272) it will be seen to have a deambulatory and a circle of nine chapels built in the slim and reed-like proportions adopted by the Catalan school. Two other works of this type have been already described—the cathedrals of Barcelona and Palma —and it is a question whether this exquisite Gerona choir is not the original that inspired them. The acuteness and stilting of the arcades and transverse arches is noticeable. It was not until 1417 that it was decided to add a new nave to the choir, and as the architect in charge proposed the unusual solution of a single nave instead of a nave and aisles to correspond with the scheme of the choir, it required a large committee of architects to pass upon the proposition before it was carried out. The result was the construction of the widest nave in Christendom, 22.25 m. = 73 feet. in the clear. The nave of Albi, on which it may be thought to be modelled, measures only 58

feet and the Cordeliers at Toulouse 63 feet, which is the closest approach to the Gerona dimensions. The width of the Amiens nave is 49 feet. To vault this space as was done was a splendid piece of daring. The nave had four bays, each with two chapels. The choir seems somewhat dwarfed, but the perspective effect is remarkably good. In Mr. Street's opinion, this is well-nigh the grandest interior in Europe. There is, however, a superabundance of insignificant flat surface, though the clearstory windows are among the finest in Spain, and



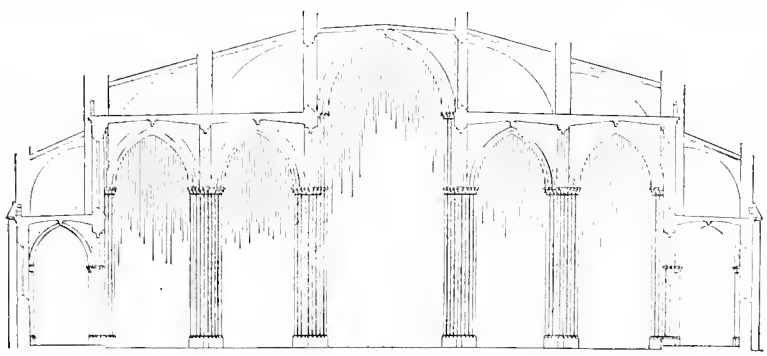
273—Cloister of Cathedral of Pampeluna. (From Enlart.)

might well have been supplemented by a triforium in place of the line of cusped opening. Of course such enormous vaults required very powerful abutments, and the buttress piers between the chapels were made about twenty feet deep.

In the northwest at Pampeluna, in Navarre, there is a well-preserved cathedral illustrating the dry geometrical style, built between 1397 and c. 1430, before the advent of any flamboyant elements. The choir has a peculiar scheme, perhaps through German influence; the choir-chapels and deambulatory are thrown together, being covered by a single vault. There is nothing remarkable in the body of the church with slender clustered piers, no triforium and a line of chapels opening on the aisles. But what gives this cathedral a high rank is its well-preserved buildings grouped around a cloister, illustrating all the kinds

of structure required by conventional canonical life. They are the most perfect of their kind of the Gothic style in Spain. These annexes are (Fig. 273), strangely enough, earlier in date than the church, the cloister having been begun in 1317. They seem all to be in a style almost purely French. The cloister is one of the most exquisite of its class. It has open, elaborately-traceried gables, with a parapet cutting across the base-line, and the light and swaying lines of the geometrical tracery are among the most artistic in Spain.

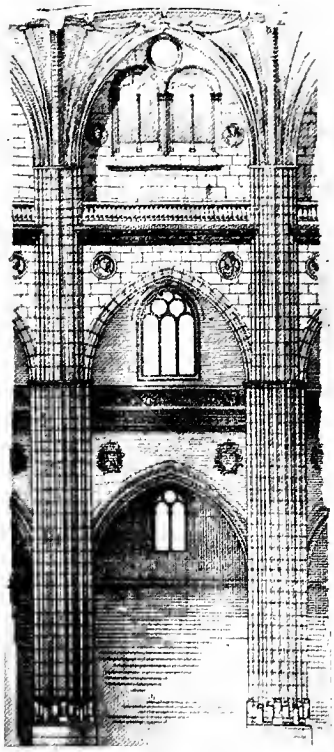
The cathedrals of Toledo, Seville and Zaragoza show that the five-aisled plan was popular in Spain. Seville was begun in 1412. The chapter set themselves the stupendous task of building the largest church in Christendom, and they succeeded, since it exceeds the cathedral of Milan. In style it is strongly national. French characteristics are reduced to a minimum. The strictly rectangular plan with the proportions 2.3 and the lack of radiating choir, reminds one (Fig. 274)



274—Cathedral of Seville: section. (From Dehio.)

of a Mohammedan mosque, such as existed in Seville itself. The heavy but exquisitely moulded piers, the high arcades, the balcony and balustrade under the low, broad clearstory, were all elements that were to be largely retained by Spanish architects until the end, at Segovia. Of course, we miss the orthodox rich choir and this is hardly compensated by the five naves and two lines of chapels, because of their hall-like effect. The substitution, also, of the thin balcony for the triforium of the earlier churches, which was made necessary by the increased height of the aisle, is a decided loss. Still, there is a simplicity and character to the detail which allows the enormous dimensions to have their full effect. At least they would if it were not for the solid coro in the nave.

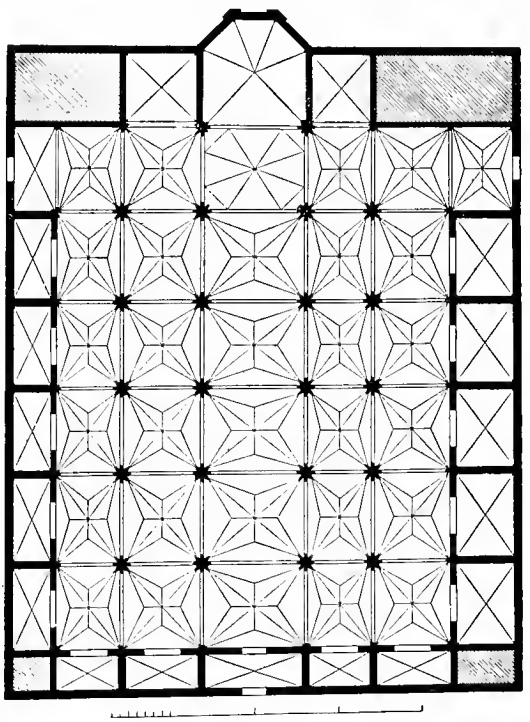
At Segovia, the same architect, Gil de Hontanon, designed a few years later a cathedral in the same style as Salamanca, but superior in the scheme of its radiating choir and in its dimensions. Built between 1522 and 1593, it is an extraordinary proof of the late vitality of Gothic in Spain. It is not only the last great Gothic church in Europe but superior to any built outside of Spain during the previous half century. Except for the dome of the lantern, the north door and a few other details, it is consistent. The roofs are flattened and concealed by parapets, the chapels and transepts (and even the nave) have small or round-headed windows that give a belated Romanesque or proto-Renaissance air, and the flying buttresses are particularly inconspicuous. The exterior is somewhat more successful than that of Salamanca; yet its very simplicity has something incongruous, unsymmetrical and heavy. The interior is helped by the rich stained glass which neutralizes the lack of memberment. No string courses break the mouldings of the heavy piers so far as the spring of the vaults. This is one of the points in which it differs from Salamanca. Also, the main arches are higher. The complete absence of tracery may be ascribed to Renaissance influence. The only elaboration of detail is in the lierne vaults that cover nave aisles and chapels similar to those of Salamanca. Although the side-aisles are so high the hall effect is decreased by the size of the piers.



275—Salamanca: bay of nave of cathedral. (From Dehio.)

Two cathedrals stand side by side at Salamanca: that of the twelfth century, already described, and that of the sixteenth century. Their façades and aisles adjoin. I think the condition is unique. The later cathedral covers six times the area of the older building, yet the two interiors by no means give one the corresponding feeling of difference. It is an interesting object lesson in the greater skill of the earlier Gothic architects in finding the right scale and proportions. In 1512 Anton

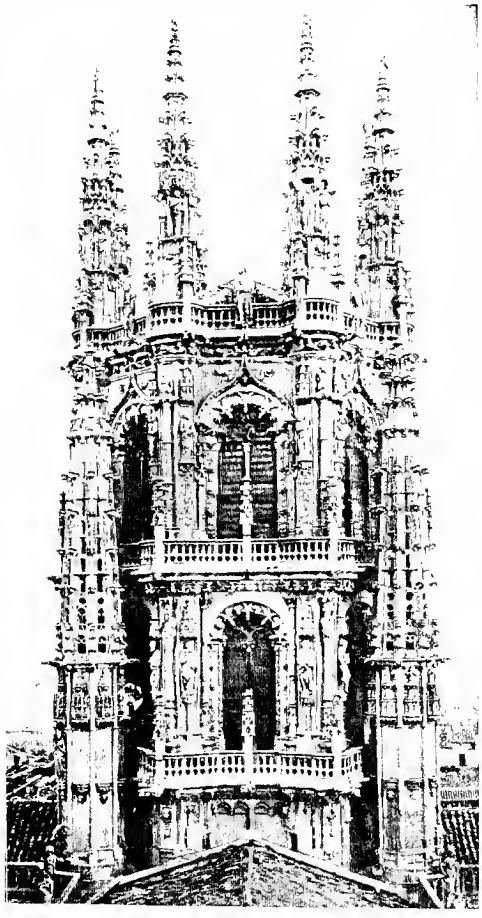
Egas was placed in charge after a meeting of twelve architects had been called to settle the plan, position, size and details. The square-ending apse was not in the original plan but was substituted in 1588 when this part of the church was reached. A few years later the apse at Segovia on far richer radiating plan shows Egas's idea of what it should have been here also. At first glance the exterior is disappointing. The plan is a plain parallelogram. The near-Renaissance plainness at the apsidal end is unsymmetrical. The Renaissance dome and the upper part of the heavy tower, added by Churriguera in 1705, are too prominent to be disregarded. The interior is far more satisfactory. The view down the aisle shows its hall-like effect and gives its lierne vaulting system very plainly. It is better than a view in the nave because of the heavy Renaissance *coro* which encumbers it. The clustered piers are not far different in memberment from that of the Catalan churches of the previous century, but their immense bulk contrasts with the Catalan slimness. The bay in Fig. 275 has certain peculiarities such as the double and triple round-headed windows with plain tracery, which reminded rather of some early Florentine Renaissance work rather than of Gothic. The use of flying buttresses is among several archaisms, in which the architect seems to hark back to the thirteenth century! But the main portal of the façade is of its age: an extremely rich and imposing sculptured composition in the latest Gothic or Plateresque manner. The way in which the lofty enclosing arcade overpowers the small double portal, is quite English, after the fashion of Peterborough.



276—Zaragoza. Plan of old cathedral. (From Dehio.)

In Fig. 276 is the plan of the cathedral of Zaragoza which will show the

scheme used for this whole class of late Gothic cathedrals of the South. It is different in being frankly a hall church, the largest of its type in the world. Its piers are very lofty, with eight engaged shafts and they support lierne vaulting. In date it slightly precedes the group of three cathedrals just described, and differs from them also in being strongly affected on the exterior by Mudejar or Moorish forms of decoration. The Mudejar tower of 1504 is particularly interesting, and seems to be the latest part—the rest belonging mostly to the fifteenth century.



277—Burgos Cathedral: central tower. (From Dehio.)

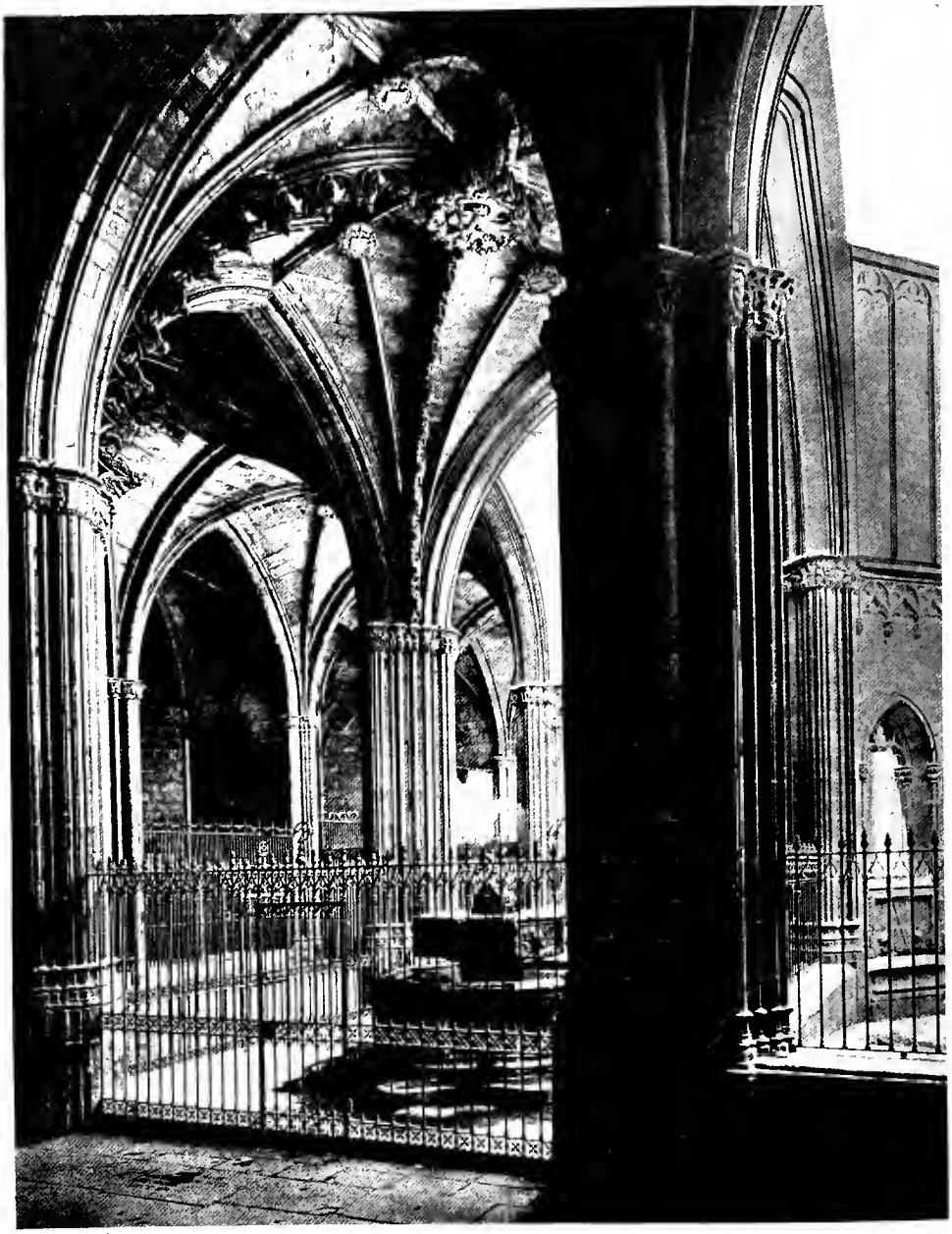
This Mudejar style, which precedes the Renaissance, was confined largely to a small part of southern Spain, and will be illustrated elsewhere, both in connection with civil and Renaissance buildings.

The transition in its northern form is well illustrated at Burgos, in the central tower or cimborio of the cathedral. In the exterior, which is given in Fig. 277, there is little except the three balcony balustrades that departs from late Gothic design; but in the interior, which can be studied in Fig. 263, the decorative forms of the octagon and squinches are distinctly Renaissance.

Spanish cloisters with their annexes, chapter-houses, refectories and the like, are hardly inferior in value to the churches for a student of architecture. In fact, there is no other important class of building, because civic independence did not exist in Spain, so of that, except in Catalonia, there are few Town Halls, Merchants' Exchanges, Belfries, etc. Neither are there many Gothic palaces. Of cloisters there

are perhaps more than in other countries in Europe, in an unbroken series, from the eleventh to the sixteenth century. Spanish conservatism has preserved the bulk of the cloisters annexed to the cathedrals as well as those of the monasteries. There was a rich series of Romanesque cloisters. For the Gothic period, the gallery of the cloister of Rueda with the entrance to the chapter-house, is a rich early transitional work, purely French. The entire establishment is one of the best preserved in Spain, though not among the largest. The chapter-house and library are in the east wing. On the south the octagonal washing-pavilion projects in front of the refectory. These are not often preserved. A little later in date is the chapter-house at Poblet, where the cloister to which it is attached is in the developed style of the late thirteenth century, with good tracery. The court of Tarragona cathedral resembles the cloister of the Fontfroide in France very closely, as does also the cloister of Veruela, both in advanced but simple transition, before the introduction of tracery. In these works it was more usual to support the arcades with coupled than with single shafts. But with the more delicate proportions of the fourteenth century, single shafts were almost universally adopted. The developed geometric style of this period has already been illustrated by the cloister of Pampeluna in Fig. 273. Among the greatest rarities in Europe are cloisters with unchanged second stories. Spain is the only country in which they still abound. The cloister of Barcelona cathedral is a peculiarly beautiful example (Fig. 278); the second is flush with the first story. The part that includes the baptistry shows some rich lierne and tierceron vaulting, which became as popular in Spain as in England, whence it came to Spain. A gorgeous example of very late work is the famous cloister of San Juan de los Reyes at Toledo, and another is that of San Gregorio at Valladolid. The latter belongs (1488–96) to the barocco style of Gothic in which the pointed arch has been abandoned; the details, however, are more exquisite and restrained than at San Juan, where fancy runs riot.

At the Monastery of Ona near Burgos the cloister, built 1506–1512, one of the most gorgeous in Spain, shows what kind of geometric tracery was used just before the adoption of plateresque design, and when what might be called the perpendicular had superseded the flowing lines. Of the style earlier than this, between it and the Burgos type, comes the cloister of Oviedo cathedral, in the flowing



278—Barcelona Cathedral: view of baptistry. (From Uhde.)

style. This plateresque ornament, so peculiarly Spanish, can be studied to great advantage in many of these late cloisters.

Another type of this tracery is developed in the cloister of S. Maria la Real at Najera (Fig. 279), where the Gothic geometrical system is completely abandoned.

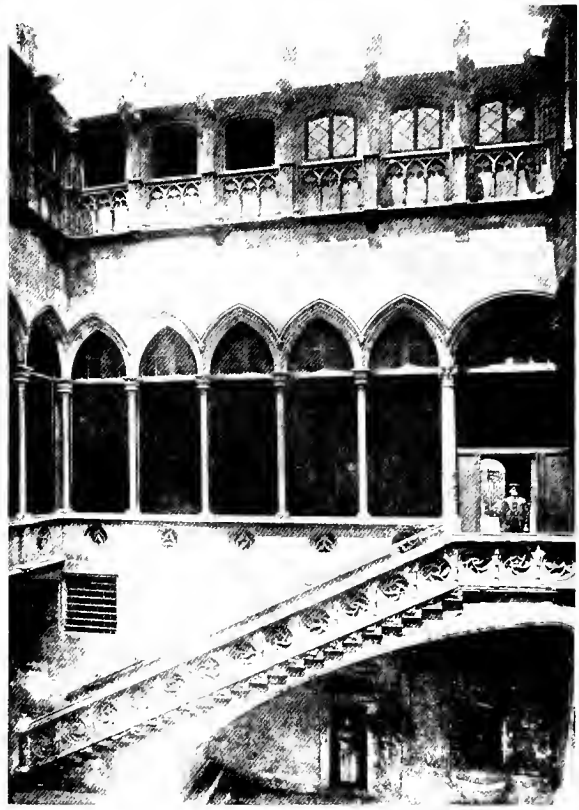
The inventors of plateresque decoration were lavish. Probably there is nothing more extreme than some of the design for wall surfaces and architectural detail such as we find in the lantern of the cathedral of Seville as an instance of interior design, and the lantern of Burgos for external work. At Seville, every bit of surface of the vaulting compartments, the ribs, the archivolts, is covered with a filmy stone lacework.

279—Cloister of S. Maria la Real at Najera. (From Lamperez.)

Among the traits that Spain and England have in common is the development of vault tracery to an extravagant degree of richness and variety. In its later phase, especially where the Plateresque style prevailed, the Moorish element was apt to enter quite strongly. The richness was increased by the use of color and sculpture beside the elaboration of rib design. The ridge rib, the lierne and tierceron, the fan-vaulting, have all been noted and illustrated. Perhaps the form to be most richly developed was the star-vaulting, which can be well studied in the vaulting of Calahorra cathedral. That it was directly from England and not through Germany that Spain received the models for all these forms seems quite certain. It is confirmed by the presence of many other English peculiarities, a few of which have already been touched upon, and which do not appear to have attracted the attention they deserve: lancet windows, banded shafts, low and broad arcades, round moulded plinths, low and broad triforium and clearstory, projecting façade towers, central towers, vault tracery, decoration of archivolts and vaulting ribs, Norman zig-zag ornament, etc. The subject would bear investigation, ever since the time (1170)

when King Alfonso III of Castile in marrying Eleanor, daughter of Henry II, inaugurated the long intimacy between England and Spain.

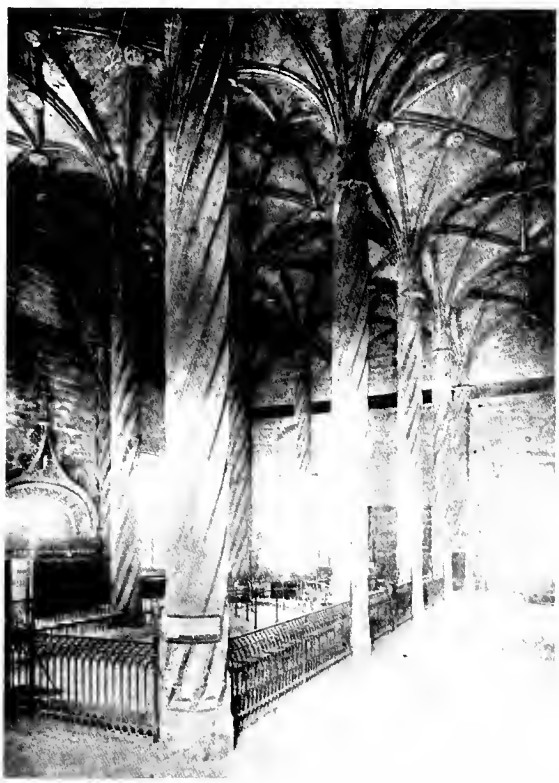
Civil Buildings.—Of the few civil structures two are selected for illustration: one in the north, at Barcelona, and the other in the south, at Valencia. In Fig. 280 is the most charming part of the



280—Staircase in court of Palace of Justice at Barcelona. (From Uhde.)

Palace of Justice at Barcelona: the side of the court with the staircase. The style is middle Gothic of the delicate, slender, Catalan type, and it compares with the best French work in its details, which are well-preserved, even in the upper gallery. A contrast to this is the Silk Merchants Exchange or Lonja at Valencia, built between 1482 and 1498. Its façade is not very interesting: a long straight battlemented line broken in the centre by a tower which, had it been completed, would have transformed the design, but as it stands, is a merely stunted base. There is, however, on the left of the tower, a

highly decorative upper gallery of arcades with flamboyant reverse-curve *accolade*. It is the interior (Fig. 281) that strikes a distinctive note. It is a hall divided by two rows of four columns into three naves of equal height. The columns are very tall and slender and are without capitals. The style is supposed to be under the influence of the south of France, but the most salient peculiarity, the twisted arrises of the columns, is a perversion that is more likely to have come



281—Interior of Exchange (Lonja), Valencia. (From Uhde.)

to Spain from Germany where we shall see it used in the almost contemporary cathedral of Braunschweig (See Fig. 411). The John of Cologne who designed the spires of Burgos toward 1450 was not the only German architect who worked in Spain. There is another interesting Lonja or Exchange at Palma, Majorca, in the Catalan style, built by the architect Sagrera between 1426 and 1450, with a better designed exterior than Valencia.

It will be clear, after this review of Spanish Gothic, why it should be studied immediately after that of France, for the influence of France was more direct and continuous and proceeded from a greater variety of French provincial and monastic sources than was to be the case with any other country. It is at the same time both open to other trans-Pyrenæan Gothic influences—especially English and German—and yet smacks strongly of the soil, showing that the Gothic spirit was thoroughly assimilated in no narrow spirit, but allowing for the diverse artistic tastes of the different provinces of Spain.

CHAPTER II

GOTHIC IN PORTUGAL

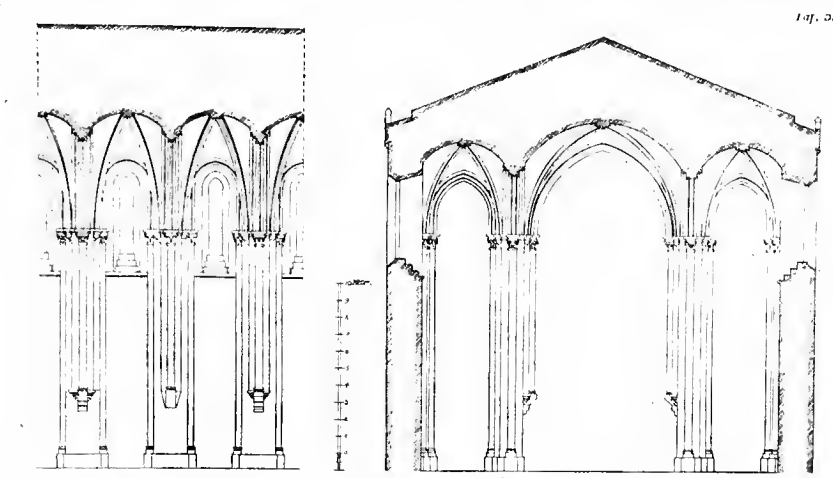
THERE is a greater difference between Portuguese and Spanish Gothic than one would naturally expect, considering their close geographical and historical relations. In the first place the three large monasteries of Alcobaça, Batalha and Belem quite overshadow the cathedral churches at each stage of Gothic development and furnish the dominant artistic types. Then, while French influence exists, especially at first, we find very strong traces of direct English influence, which is, in fact, dominant at Batalha, where it is more apparent than in any other continental building. Finally, at the close there is formed a style specifically Portuguese, called Manoelino, because it was created during King Manoel's reign. It has decorative analogies, to be sure, with the late Spanish Plateresque, but its Moorish traits are derived more directly from Moorish originals than in Spain and there is added a curious element that seems Indian in origin, due to the opening up of India to the Portuguese by Vasco de Gama.

What remains of the original plan of the cathedral of Lisbon and the better preserved old cathedral of Coimbra shows that in the middle of the twelfth century Portugal was dependent on Spain and followed the tunnel-vaulted type of Santiago and St. Sernin of Toulouse, with groined vaults over the side aisles. The same form of Romanesque was continued in the larger cathedral of Evora (1185–1204), with the substitution of pointed for round arches in the nave. It was while these churches were being built that the Cistercian monks brought from Burgundy—probably from Clairvaux itself—their form of early Gothic and embodied it in one of its most grandiose productions in the country, the monastery of Alcobaça.

The church and monastery, begun in 1158, were ready for occupancy in 1223. The church was substantially finished in 1211. Its

282—Interior of monastic church, Alcobaça. (From photo.)

dimensions were imposing, with a length of 106.50 m. (or 348 feet) and a width at the transepts of 155 feet, making it much the largest church in Portugal. The ground-plan is exactly like that of Clairvaux, with a crown of nine chapels in the choir, in an unbroken semicircle. The only difference is that the nave of Alcobaça has two more bays. The two most striking features of its interior (Fig. 282) are: the spacing of the piers and the relative height of nave and aisles (Fig. 283). The twenty-four clustered piers of Romanesque plan are so heavy and close as to largely mask the aisles and give paramount importance to the nave, whose very massive transverse arches



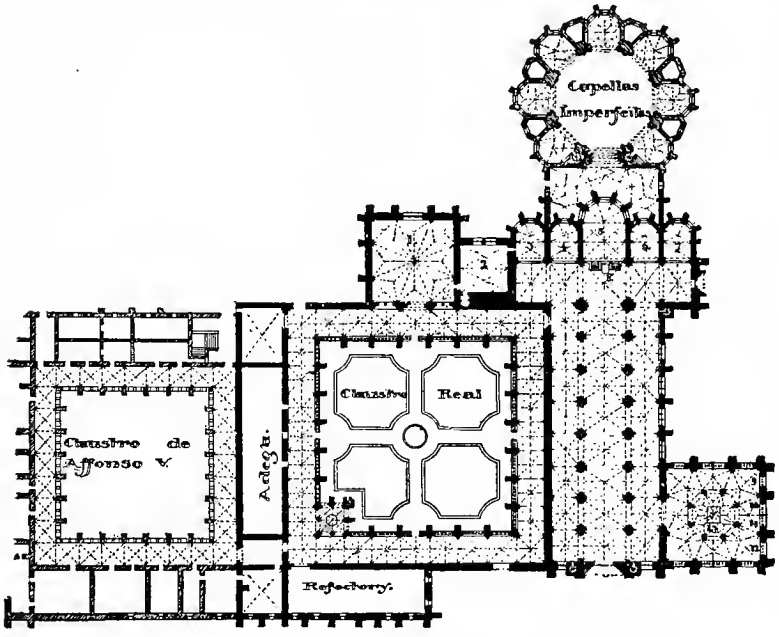
283—Sections of monastic church, Alcobaça. (From Dehio.)

and diagonal ribs rest on an unusual group of three engaged shafts which descend almost to the floor but end on corbels. This closeness of the piers is what prevents the interior from assuming the appearance of a hall church, because the side-aisles are vaulted practically at the same level as the nave, the relation being 68 to 75 feet. This makes a radical difference not only from Spanish Cistercian but from the Burgundian models with which we are familiar, and introduces the Plantagenet influence of southwestern France, which is also evident in the domical form of the vaulting. But, even in this part of France there remains no interior that is like it. Except in the choir there are no flying buttresses and this explains the extraordinarily heavy masonry.

The section in Fig. 283, when compared with Figs. 114 and 362, will show how this remarkable church stands midway between the cathe-

dral of Poitiers, where the aisle vaulting is slightly lower, and S. Elizabeth of Marburg, where they are absolutely equal, while in its effect it resembles neither, on account of the heaviness and closeness of its piers. As Alcobaça antedates the Marburg church it fills an interesting historical niche.

The choir is not only the earliest but the most interesting and thoroughly Burgundian part. The richness of its double ambulatory



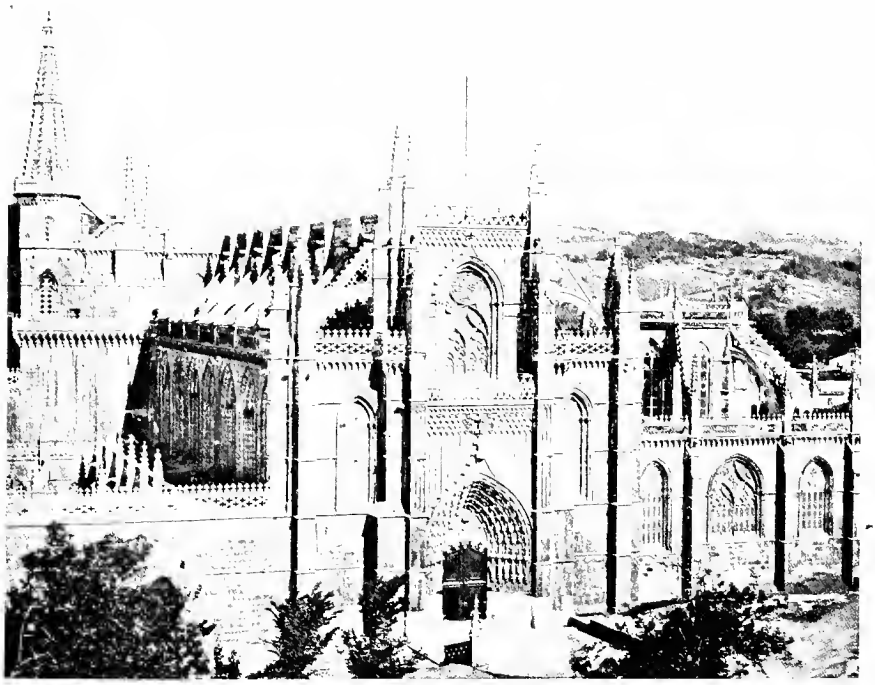
284—Batalha: plan of church and monastery. (From Watson.)

and its chapels place it in a type rare in the peninsula. Perhaps its unusual development was partly due to the plan to use it as a royal Pantheon and national monument.

The earliest of the cloisters, the Claustro do Silencio (begun in 1310), is in pure French style of the late thirteenth century, with coupled shafts and groups of three arcades and a rose to each bay, showing communication with France during more than a century.

To judge by the rather inferior works produced during the thirteenth and fourteenth centuries, Portugal was but little affected by the example of Alcobaça. It is only by such exceptional works as the choir and cloister of the Cathedral of Lisbon that we note a continuance of good architectural tradition. The second of the great

monuments to be described is intimately connected with the establishment on a firm foundation of Portuguese independence, by the great victory of 1385 over the Castilian army. King John, or João, had vowed to build a monastery on the battle-site in case of victory. Hence the name of it, Batalha: more particularly Sta. Maria da Victoria. Another historical event intimately affecting the monument, was the marriage in 1387 of the new Portuguese King to Philippa, daughter of John of Gaunt, which cemented the alliance between England and Portugal already formed in 1386 by the treaty of Windsor.

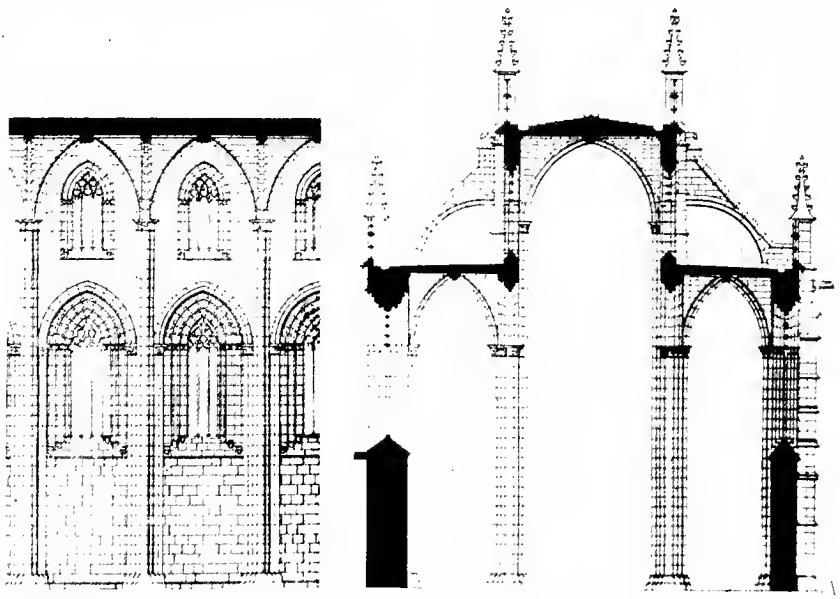


285—Batalha: general view of church and monastery from west. (From Watson.)

This explains, perhaps, the English traits we shall notice in the architecture of the monastery of Batalha.

While at Alcobaça very little remains of the monastic buildings in original condition and the church itself has been disfigured by vandalism, the case is quite different at Batalha. The plan in Fig. 284 shows the extraordinary richness and preservation of the entire group. The church itself is only of medium dimensions (265 x 109 feet) and of the simpler Cistercian plan without ambulatory or radiating chapels and without aisles in the transept. It is the unity of design by which

the Founders' chapel at the façade and the cloister on the left are brought into relation with the church, that gives the monument its charm (Fig. 285). When the details are studied we find that we must agree with Mr. Watson in disputing the absolute dominance of English traits. But I would go further and find not merely native and French but even German and Italian elements; to the extent of making of Batalha an even more cosmopolitan work than Milan cathedral. Two names of architects are especially connected with it. Alfonso Domingues (+ 1402), who designed and began it, and his successor Huguet, whose name seems to be French, and to whom the execution



286—Batalha: section of church. (From Dehio.)

of Domingues' plan was largely due. This plan was never fully carried out, though the work lasted, at intervals, until the middle of the sixteenth century, and the buildings show two distinct styles.

To begin with the church itself; so simple inside, so decorative outside. It is of the hall type, inspired perhaps by Alcobaça but in a developed Gothic style (Fig. 286) interesting to compare with the hall-type of the Catalan school, especially the Cathedral of Barcelona. There is just sufficient difference in the levels of the crown of the vaults to allow of low flying buttresses above the aisles—a novelty in Portugal. The elaborately cusped, crocketed and traceried buttresses,

combined with the open balustrades and delicate panelling, give a rich but delicate symmetry. In the façade the main portal, which stands alone, is like so many Spanish doorways, of a design similar to the French norm; but nothing else is French. One finds similar pinnacled buttresses, flat roofs and panelled surfaces in England and

287—Batalha: interior of church. (From photo.)

in Italy and the plan resembles that of S. Maria dei Frari in Venice and other Italian churches. The developed flamboyance of the central window is later in its design than the rest, and is the most elaborate in Portugal and thoroughly native in its close patterned stone framework. The simple interior (Fig. 287) resembles Alcobaça

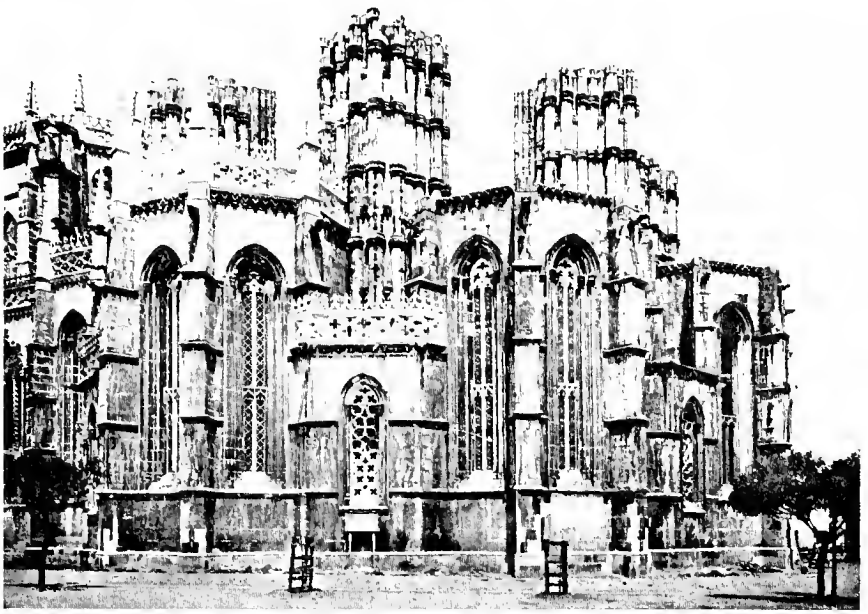
in the heaviness of its piers and walls. The effect is one of solid verticality. The low clearstory over the aisles is the greatest deviation from the Alcobaça type. The elaborate memberment of the piers, articulated as it is, is not logical because it does not provide any spring for the diagonal vaulting ribs—a fact which alone would show the designer to have been a native. Both the pier plan and the use of ridge-ribs in the vaults are English traits.

The most original and artistic parts of the Batalha scheme are three concentric structures; the two memorial chapels and the chapter-house. Each one is quite distinct in plan. The chapel of the founder (King John), which opens into the nave on the right and continues the line of the west front, is a square which passes to an octagon by means of eight slender piers supporting a high octagonal lantern originally surmounted by a spire. The arcades are extremely stilted and extravagantly cusped, and their profiles and capitals are more delicate than those of the church. The lantern with its large and richly traceried windows was once surmounted by a spire, which rising beside the façade of the church must have been effective. The chapel is large, forming a square of 80 feet, with its octagonal lantern of 38 feet.

The second concentric structure is the chapter-house which opens out of the cloister; and while it is somewhat smaller—a square of about 60 feet (18.90 met.)—it is remarkable as being the boldest piece of vaulting in Portugal and one of the boldest undertaken outside France. The entire square space is covered by a single domical ribbed vault on octagonal plan obtained by bold arched squinches across the corners. In England and even in France at least one central support would have been used, which would, of course, have much diminished the height and effectiveness. This is said, in fact, to be the largest space covered by a single Gothic vault.

Hardly had the Capella do Fundador (Chapel of the Founder) been completed (1433) than the founder's son planned, after the Spanish and English fashion, a still more magnificent Royal Mortuary chapel off the centre of the apse and on its axis. How the architect, who seems still to have been Huguet, planned to join it to the church, we cannot say, as the present connection is of later date. Had it been completed this structure would have been the most magnificent Gothic concentric structure in Europe. Its scheme was a central octagonal dome, 72 feet in diameter, resting on eight heavy piers

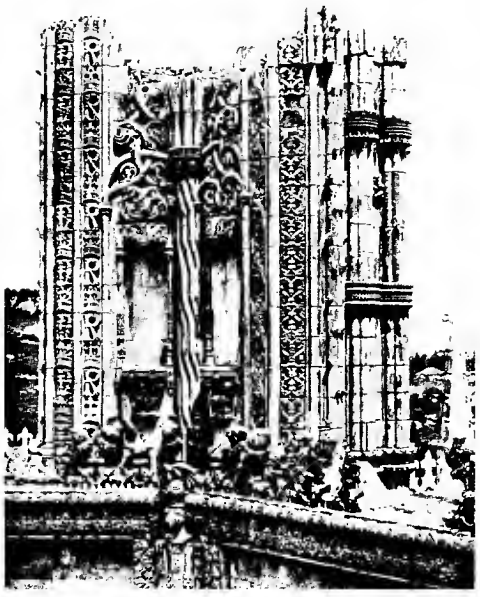
and encircled by seven vaulted pentagonal chapels between which were niches for sarcophagi. The original style is best seen in the windows of the chapels, and is practically the same as the simpler part of the church itself, and extremely effective. From its incompleteness the chapel received the name of "Capellas imperfeitas." Some seventy years after it was begun King Manuel joined it to the church, remodelling the apse and attempting to complete it (Fig. 288).



288—Batalha, church: view of Capellas imperfeitas. (From Watson.)

In this later work on the "Capellas imperfeitas" we can study one of the masterpieces of the peculiarly Portuguese style called "Manoelino," grafted on a stem of pure middle Gothic. It was the native form of the Renaissance it is true, but as it is a modification of Gothic, it is allowable to include this example of it in this chapter. We know of the wonderful colonial expansion of Portugal shortly before and after 1500, especially the conquests in India and Indo-China after Vasco de Gama's voyage of 1498. King Manuel (1495–1521) individualizes this apogee of the power of Portugal. The splendid art of India exercised a compelling influence on the Portuguese artists and under this spell they created the semi-Indian style which was Portugal's contribution to art history. Any one familiar with Indian

decorative work will recognize the source of the design in the upper part of the Capellas imperfeitas given in Fig. 289. It is a superb piece of adaptation and creation. Free work of this type was more successful than where more of the Gothic elements are retained, as in the immense main doorway of the chapel (40 feet high), though this also has splendid sweeps in its lines, notwithstanding its elaborate cusps, crockets and finials carved with a delicacy that is unsurpassed in any Gothic work (Fig. 290).



289—Batalha, church: detail of unfinished upper part of Capellas imperfeitas. (From Watson.)

The third of these Portuguese monasteries is that of Belem, in which we see the transition to the Renaissance. It commemorates another great national event; the discovery of India by Vasco de Gama. It is the masterpiece of the Manoelino style. Though commenced in 1500 by Bowtaca, author of the general scheme, it was not until about 1517 when João del Castilho was put in charge that the work assumed artistic importance. This architect, through his work here, at Thomar and at Alcobaça, became not merely the greatest Portuguese architect, but practically the creator of a style. The group of buildings consists of church, cloister, refectory, chapter-house, sacristy, hall and dormitory, forming a homogeneous group, which was all carried forward simultaneously. The plan given in Fig. 291 shows the richness of the vaulting (novel as yet in Portugal) and the unity of the composition. Beside the Spanish architect worked the French master Nicholas, to whom a large part of the pure Renaissance detail is due, when distinct from the native Manoelino.

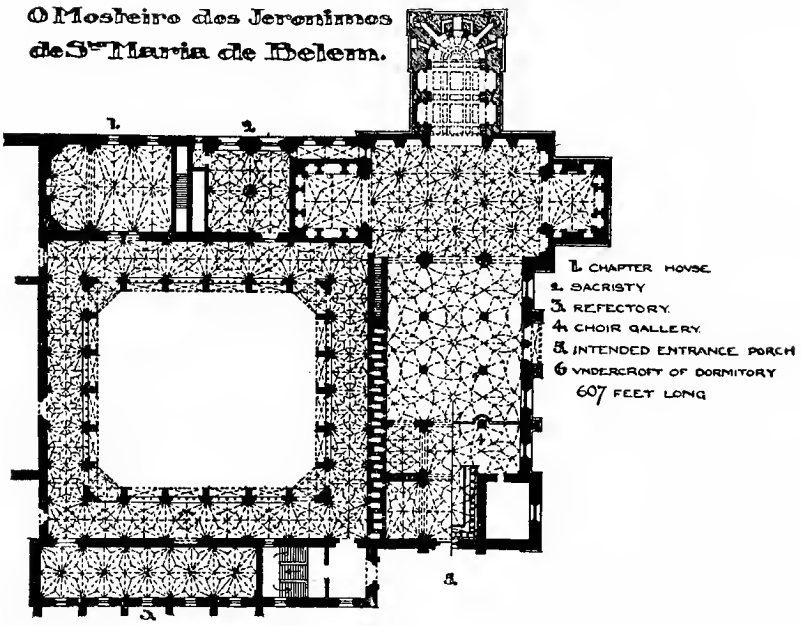
The scheme of the church itself is that of a hall-church, more logically carried out than either at Alcobaça or Batalha without flying buttresses, with aisles of equal height, and with supports so

delicate as to give an unbroken hall effect to the interior, 80 feet high, with an imposing transept and a later chancel (Fig. 292).

The exterior is massive and at the choir end is quite plain. The most successful part is the south doorway, given in Fig. 293, with its

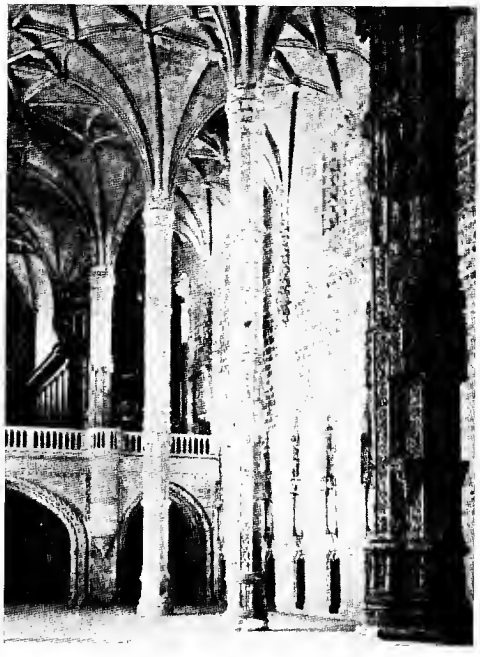
290—Batalha, church: entrance to the Capellas imperfeitas. (From Watson.)

flanking windows. This group is typical of the curious mixture of delicate and flamboyant detail peculiar to Manoelino work. The pointed arch is perceptible only in a few minor details, though, of course, the arrangement of statuettes under canopies is Gothic. The decoration of the windows, part Moorish part Indian, with its semi-



291—Plan of monastery of Belem. (From Watson.)

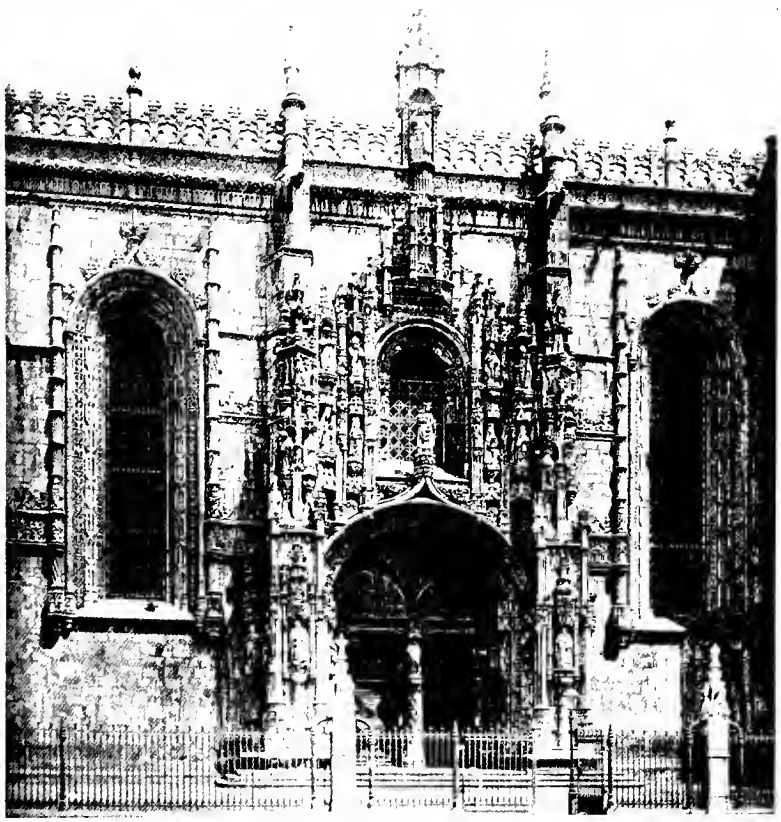
Gothic, semi-naturalistic crown, combines most of the elements scattered here and there through Manoelino work, together with its typical grasp of mass and proportion.



292—Interior of church, Belem. (From Watson.)

The view of the interior hardly does it justice, owing to the *coro*, but it does show the extraordinary boldness of the slender piers, which seem to be unique in their design, with eight almost ridge-like and infinitesimal shaftings cutting up the richly-decorated surface vertically, while bands, brackets and tabernacles for statuettes cut it horizontally. No other internal piers are comparable in richness to these. The contrast to the plain walls is extraordinary and makes it probable that

some wall decoration was intended. The vaulting, with *liernes* and *tiercerons*, springs lightly from the super-capitals. A feature that does not appear in this view is the far heavier vaulting of the transept: a bold quasi-tunnel vault 65 feet wide and 95 feet long, rising above the nave vaulting and supported on that side only by two piers heavier than the rest (they show in the foreground

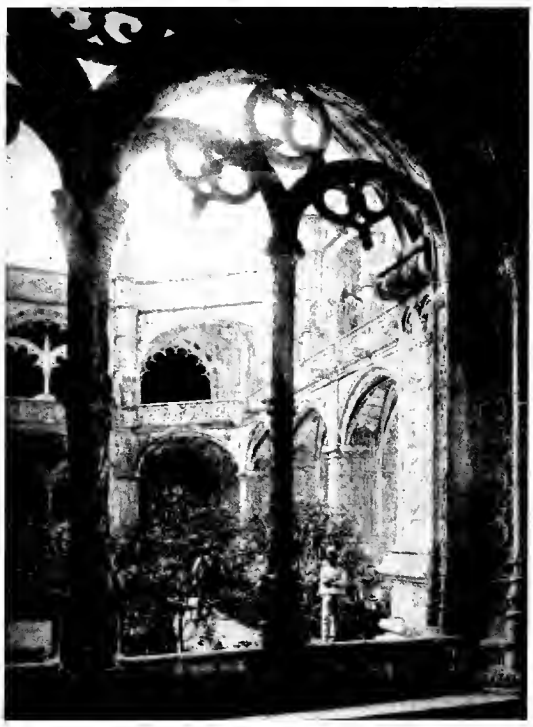


293—Belem: south side of church. (From Uhde.)

of Fig. 292). It must be realized that though this transept vault appears to be divided into six compartments, none of these have a continuous support, and that on one side of this enormous width of 65 feet the only support of this vaulting, about 90 feet high, is a couple of piers not six feet in diameter. This, too, is a land of earthquakes, where the majority of the much more easily built Renaissance domes have been thrown down.

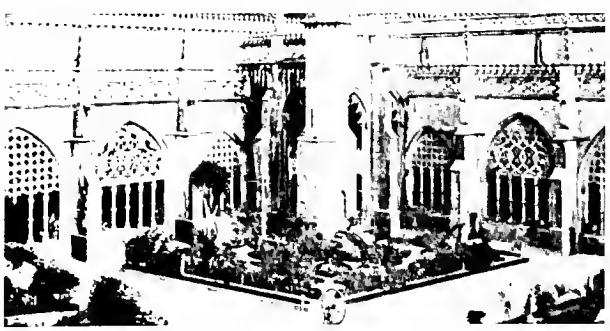
294—Belem. galleries of cloister of monastery. (From Michel.)

In Fig. 294 is a view of the cloister. It is a notably rich piece of decorative work, yet hardly as felicitous as the best Manoelino designs. The pilasters of pure Renaissance design toward the court were added to mask the buttresses which appear to have been found necessary for counteracting the thrust of the vaults after construction. The curious tracery and decoration has no trace of Gothic forms yet, however one may criticise, in this case, the details—as one certainly can in these arcades—the general effect is satisfying, in a strange way. The view of the court, with its second-story arcades, in Fig. 295 exercises the same peculiar fascination.



295—Court of cloister, Belem. (From Uhde.)

In this connection it is interesting to compare this Belem cloister with the *Claustro Real* at the monastery of Batalha (Fig. 296) to which tracery was added by the architect Fernandez at about the same time that he was doing his wonderful work on the "Capellas Imperfeitas." In this tracery there is nothing



296—Claustro Real, Batalha. (From Watson.)

297 — Lavatory of Claustro Real, Batalha. (From Watson.)

Gothic. Rather are we reminded of Cairene or other Moresco-Spanish and Moorish panelling. To show the breadth of the artist's sources he has run panels of reticulated tracery across the lavatory, which appears in the central corner of our illustration and in Fig. 297, with a design based on interlaced branches with leaves and buds in a close schematic pattern.

For the rest of Manoelino work, especially for that at Thomar, the reader is referred to the chapter on Portuguese Renaissance, though the difference in style is so slight as to show how impossible it is to be too strict in deciding whether to assign Manoelino work to a Gothic or a Renaissance chapter. Architects and artists should study and appropriate its motifs with far greater avidity than they have thus far shown.

CHAPTER III

GOTHIC IN ITALY

IT is a well-recognized fact that of all European countries, Italy showed herself the least susceptible to Gothic art and never thoroughly understood or liked it. The round arch was never entirely eliminated; the ribbed-vault never wholly superseded the wooden roof; the principle of balanced thrust was not properly applied; the architectural forms such as the flying buttress and immense windows which are the logical result of these principles were almost never used. The extensive choir, with its crown of radiating chapels and its ambulatory, so characteristic of a French interior, was never adopted. Of course there are a few transitional and Gothic buildings built by Cistercian architects which are relatively pure, but hardly a single structure due to Italian hands can be judged by northern standards. They are works *sui generis*. Italy opposed science in architecture.

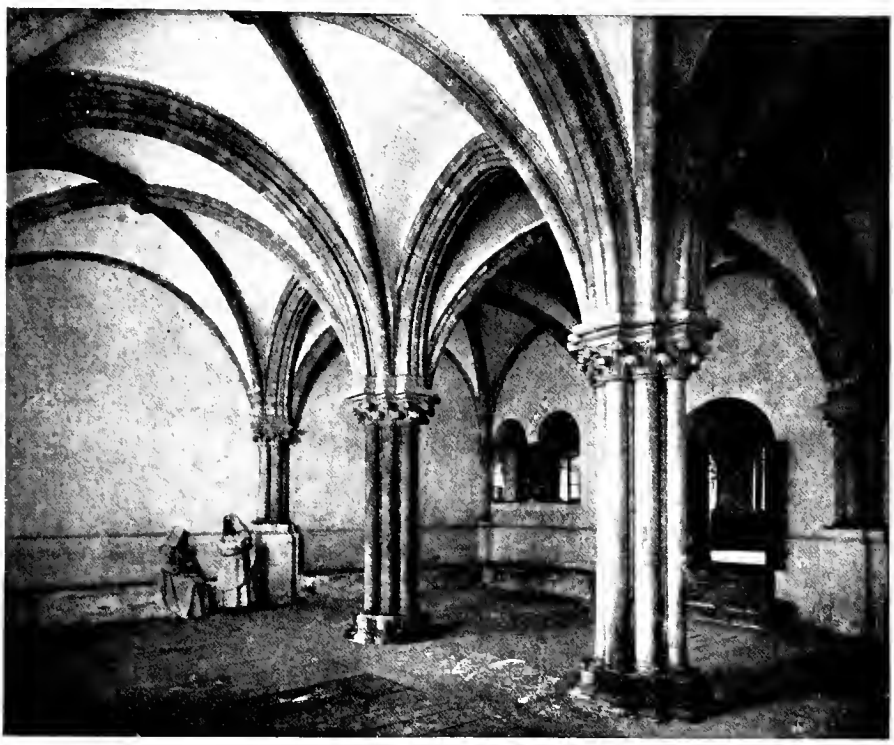
It seems, at first blush, strange that while in France the monks had so little to do with the development of Gothic after the earliest stages, and even elsewhere retired into the background after the transitional stage had passed, it was the monks who not only furthered its introduction but guided its further development in Italy. The lay-guilds here held to the old traditions that smacked of the native soil, and the cathedrals, which were so largely their work, have much less of the Gothic character than the monastic churches. The earliest introducers of the new style were, naturally enough, the Cistercian monks from Burgundy in France. St. Bernard was placed by the papacy in charge of monastic reform in Italy, and during the second half of the twelfth and the first half of the thirteenth centuries, Italy was filled from the Alps to Sicily with large establishments of the Cistercian order, built or rebuilt in the plain style peculiar to it. Some allusion to this fact was made in Vol. II, pp. 306-9. The buildings at Fossa-

nuova there referred to, are mostly by the hand not of Italian workman but of the French monks and the church is similar to that of the order at Pontigny in Burgundy. They form perhaps the most interesting and well-preserved monastic buildings in Italy. In the exterior of the church, its most characteristic feature is the central octagonal tower and lantern. There is no trace of Gothic features in the plain small windows and the buttress-piers. It is a building

298—Fossanuova: monastic church. (From photo.)

erected toward 1190 in the style current in Burgundy in 1150 to 1160. Its plan is important to observe, because it influenced the majority of plans of churches in Italy during the next two centuries. It is extremely simple: a T with a square apse flanked by two square apsidal chapels. The type, as is evident in France, Spain, England and Germany is specifically Cistercian: it made but little impression in France, but in Italy, where the choir never was developed into the rich and beautiful grouping that we see in France, it was adopted by the other monastic orders and became popular in Franciscan and Domin-

ican churches. The interior, of which a view is given in Fig. 298, is typical of the plain Cistercian proto-Gothic of Burgundy, but ribbed vaulting appears only in the transept. The Cistercian monks next built or rebuilt the monastery at Casamari, where the church was constructed between 1203 and 1221. Here there is a logical use of ribbed vaulting throughout, instead of only in transept and choir as at Fossanuova. The windows become pointed: small rose-windows ap-



209—Fossanuova monastery: Chapter-house. (From photo.)

pear in the transepts. It corresponds approximately to the stage represented in the Ile-de-France by St. Germer, built about sixty years earlier. While the plan is Burgundian and the general direction was undoubtedly French, the handling, especially in the capitals, shows itself to be that of Italian pupils, whereas at Fossanuova even the details are French. This is very clearly shown in the Fossanuova Chapter-house (Fig. 299). The chapter-houses in the two monasteries are extremely charming and illustrate this same relation of French and Italian work. The one at Fossanuova has only one central column, that at Casamari has two. Of the two cloisters, the

more recent of the galleries at Fossanuova has some of the most interesting, varied and sharply-cut detail in Italy, in its capitals and shafts (Fig. 300). Casamari has several features in its monastic structures that we do not find at Fossanuova. There is an untouched main entrance to the monastic enclosure, with double archway—a large one for vehicles and a small one for passengers. It includes a porter's lodge and second-story room. Then, there is an open porch with three arcades, attached to the façade, a feature planned at

300—Fossanuova monastery: cloister; later section. (From photo.)

Fossanuova but never carried out. A bit of detail in Fig. 301 shows Italian handling of a French scheme made classic.

The other principal monasteries in this Cistercian proto-Gothic group are: Arabona in the Abruzzi, Chiaravalle di Castagnola near Iesi, San Galgano near Siena, and S. Martino al Cimino near Viterbo. They strike a peculiarly exotic note in Italy, and while they are a novelty they are at the same time an instance of arrested development. All about them were imitations by Italian artists in churches, town-halls and private houses, especially at Piperno, Sezze, Alatri and other towns in the Roman province. S. Martino al Cimino evidently

proceeds from a different French original than that which inspired the others. The view of the interior in Fig. 302 shows that instead of the plain, Romanesque grouped pier with engaged vaulting shaft ending in a plain corbel, it has the alternation of column and pier popular in France between c. 1160 and 1190. Another difference lies in its choir which is not square-ending but polygonal. Several cloisters at the neighboring Viterbo show French, possibly Cistercian models, *e. g.*, that of S. Maria della Verità (Fig. 303).

301—Detail of cloister at Casamari. (From photo.)

Attention has recently been focussed on a ruined church of this group at San Galgano, because it is known that monks from this

302—S. Martino al Cimino, monastic church. (From photo.)

monastery were in charge of the construction of the neighboring cathedral of Siena, and the peculiarities of this important building have been ascribed to this source. With this I cannot agree. The Cistercian architects who were sent to build San Galgano in the first half of the thirteenth century did not furnish any prototype for Siena and the San Galgano monks were at Siena in the capacity not of architects, but merely of business managers. Several points are of

interest at S. Galgano. Its ruined walls show how brick was used for the core of the structure, faced with stone instead of the customary solid stone walls. The *oculi* above the windows in the clearstory are also a novel imported feature, such as has been noticed at Notre Dame. Here it is in embryo. It will become a general feature in Italian Gothic.

All of these Cistercian churches are heavy, plain structures, with thick walls, without large or traceried windows, and with none of the

303—Cloister of S. Maria della Verità, Viterbo. (From photo.)

features of even advanced transitional Gothic. A trifle more developed in style is a very interesting building in the extreme North: S. Andrea at Vercelli. It is (Fig. 304) as heavy in its exterior; its plan is similar, except for its very large Norman-like central lantern, but the square towers on the façade are exceptional, and also perhaps of Norman origin. The use of flying buttresses is a transalpine trait and their abutting against buttress strips and a wall arcade. On the other hand the delicate galleries are an Italian characteristic. Otherwise the entire composition is un-Italian and one of the most artistic in Italy. The proportions of the interior, with its extremely pointed arcades, like

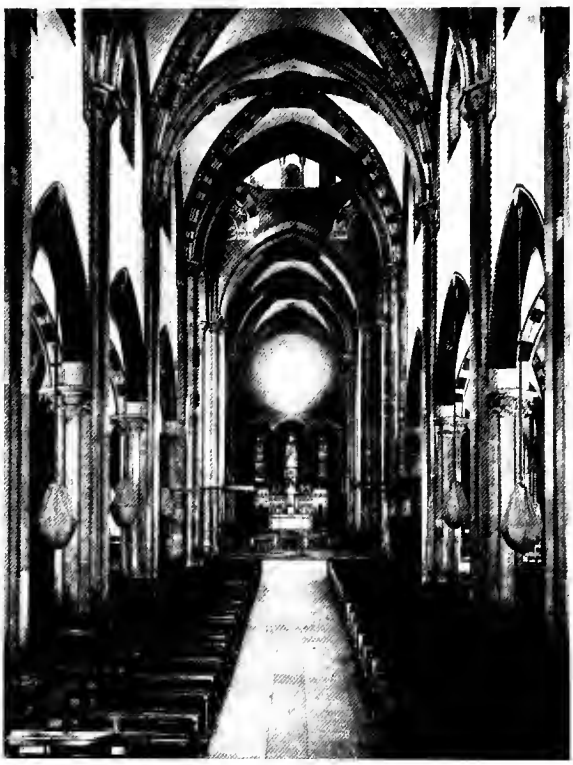
early English lancets, are much less heavy and it has already considerable Gothic feeling. It was built between 1220 and 1230 and so was contemporary with the latest of the Cistercian group. Like S. Galgano, it combines stone with brick. Brick rules the exterior; only the façade is of stone; in the interior the arcades are of brick; the vaulting ribs, part stone, part brick, a peculiarity due perhaps to Lombard influence. This interior may be considered the most artistic of any in the earlier group. The round-cored piers and the details of capitals and shafts are all transalpine (Fig. 305). The chapter-house, supported on delicate columns, is even franker in the use of brick.

We have now reached the period in the thirteenth century when the two monastic orders of St. Dominic and St. Francis, founded in

304—S. Andrea, Vercelli. (From photo.)

1212 and 1218, began to spread over Italy and to build monasteries. These monks became the dominant force in architecture as well as in almost every other form of Italian life. Their earliest architectural masterpiece is the famous church and monastery of St. Francis at Assisi. The church is, in a way an exotic, like the buildings already described, but an exotic that not only entered into the fibre of Italian art and life, but was partly moulded by them. It became the mother church of the order, was freely imitated, and answered quite well as

a type of the auditorium which was best suited to the requirements of the preaching friars. The churches of the thirteenth and fourteenth centuries in Italy were planned to subserve a new form of religion and the type of hall church was best suited to it. The old service of devotion was replaced by one in which oratory was the central attraction, with popular preachers speaking to crowded and enthusiastic audiences. Interiors must offer the least resistance to the travelling of sound and the least obstruction between audience

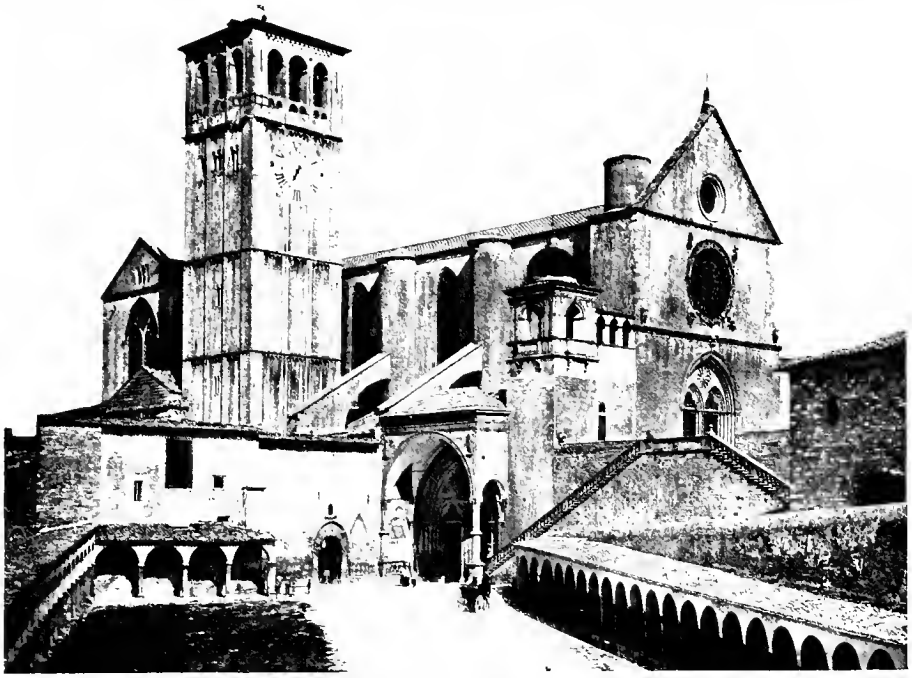


305—Interior of S. Andrea, Vercelli. (From photo.)

and orator. The Cistercian type was quite unsuitable; so was the basilical type with close-set lines of columns. Even the normal developed French type, with its slender piers, was not the ideal form. It had to be either a church with wide, single nave, or one with aisles so high as to throw them into the closest union with the nave and with supports as widely spaced as possible. This is, I believe, the real explanation of the typical Italian interior, which is so severely criticised for its unæsthetic bareness, and the large size of its units which

diminish the apparent dimensions. We may believe that had Italian architects consulted only their artistic taste, the interior of Santa Croce, in Florence, which may be taken as a fair example, would have had quite different proportions. The analogies to this type are some churches of Southwestern France, of Catalonia and Germany.

St. Francis at Assisi has (Fig. 306) a most commanding position, of which the best advantage has been taken. The bluff on which it is built was terraced out and immense retaining walls were built.



306—Church and cloister of St. Francis, Assisi. (From photo.)

The exterior is quite Italian, except for the portals. The tower is in an unusual position near the transept. One turns to the South of France as a source for the one-aisled interior, and to Northern France for the decoration of portals and interior. It has been noticed that the more cylindrical form of the buttress-piers has its counterpart at S. Cecile in Albi: but Assisi is earlier. In the lancet-windows and the tracery in the transept windows there is for the first time a trace of the innovations in the development of Gothic windows which had obtained in France. The unusual juxtaposition of upper and lower church is made possible by the steep sloping of the ground. The

heaviness in the forms of the lower church give it almost the aspect of a crypt—but such a crypt as had never been seen. There is no more admirable sweep of lines. The large, two-light windows with simple but good tracery in the upper church are quite evidently of Northern design and remarkable for their date. The suggestion has recently been made that the upper church, because of its advanced and delicate forms, was considerably later than the lower church; but there are no grounds for such a theory. The entire structure was completed between 1230 and 1240. It served as a model for a number of churches in Umbria and Tuscany, but none of these show the same foreign handling in the details (Fig. 307).

307—St. Francis, Assisi: upper church. (From photo.)

Near Perugia the Cistercian church of Monte l'Abbate has a cross-vaulted interior of a single nave and the resemblance to St. Francis is accentuated by the immense crypt. The interior is more imposing but less symmetrical. Another example of a one-aisled church is S. Michele at Monte Sant Angelo in Apulia, which has three instead of four bays besides a square apse. It is simple in its details—all its ribs having square profiles—but its proportions are bold and fine. It dates from 1274, and it seems natural to ascribe it to some architect from the South of France, such as those who were in the service of King Charles of Anjou.

In the three-aisled type a corresponding position to the church at Assisi was taken at exactly the same time by S. Francesco at Bologna. For a building so palpably Italian in its effects, this church has an extraordinary number of points in which it followed French

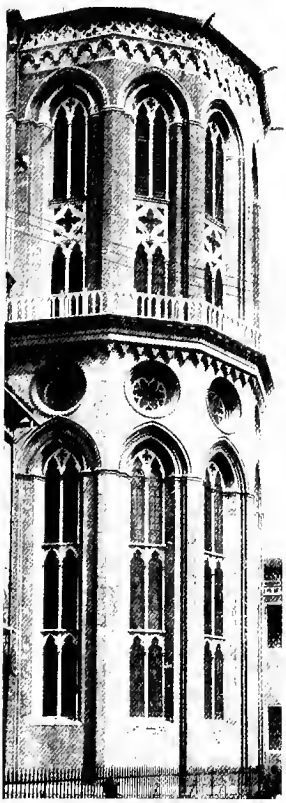
methods. A glance at the east end will show a peculiarity almost amazing in Italy, the use of flying buttresses! They are perfectly plain, without terracotta ornaments to relieve the bare bricks: but, there are only a very few other cases of their use in all Italy. In the interior, again, we see sexpartite vaults, which were also practically unknown in Italy; finally, the apse has radiating chapels and an ambulatory, another imported feature that was never adopted in the peninsula. It is evident that the plan was furnished by a French architect, perhaps a Cistercian from Burgundy. Equally certain it is that it was an Italian who built it, when we study the octagonal piers and the plain, unmoulded vaulting-ribs as well as the lack of tracery in the clear-story, which are filled with old-fashioned thin slabs pierced with circular openings. The general view shows that an interesting composition of square, colonnades and pyramidal structures were planned.

308—S. Maria Novella, Florence. (From photo.)

Very soon after, in the two decades following 1250, the Dominican and Franciscan architects freed themselves from too close an imitation of Cistercian models and developed national traits. Sent around by their orders from one city to another and becoming the main protagonists of the new style, their activity went contrary to the establishment of local Gothic schools.

The two most symmetrical interiors of this early native monastic school are those of S. Anastasia at Verona and S. Maria Novella (1278) in Florence, because, perhaps, the tendency to space the supports is restrained. In both plans we see, to be sure, the Cistercian scheme of two chapels on either side of the apse opening on a transept,

and a three-aisled body with six bays. But at S. Anastasia the supports are columns—not the old basilical monoliths, but heavier shafts of red marble—and the vaulting shafts rise from the capitals. The triforium hardly survives, in the form of a line of blind oculi, with a clearstory of highly decorated oculi. The windows have an elementary form of plate tracery, and the interior has the advantage of one of the most harmonious and well-preserved systems of reliefs, wall-painting and polychromy, dating shortly after the construction and well worth careful study. For a more heavily-proportioned, widely-spaced interior of this type, see Fig. 310.



309—SS. Giovanni e Paolo, Venice: apse. (From photo.)

At S. Maria Novella there is more Cistercian influence, both in the plan and in the use of piers in place of columns. In its façade we see a gem of Tuscan art, and Alberti's Renaissance changes (Fig. 637) have not fundamentally modified its medievalism. But it is Romanesque, not Gothic. The Campanile on the left, perhaps the most exquisite in Tuscany, is the only other commendable part of the exterior, which is plain and uninteresting. The interior (Fig. 308), while satisfying in its lines, is unsatisfactory in its lighting by the small oculi; and the plain windows of the aisles are distinctly retrogressive when compared with those of S. Francesco at Assisi or Bologna. For a good, early Tuscan use of traceried windows one has to turn to a few churches such as S. Pietro at Arezzo (1277), where the charming interior bears some resemblance to S. Maria Novella. In Florence itself, S. Trinita, with its square piers, is of even earlier design and charmingly symmetrical.

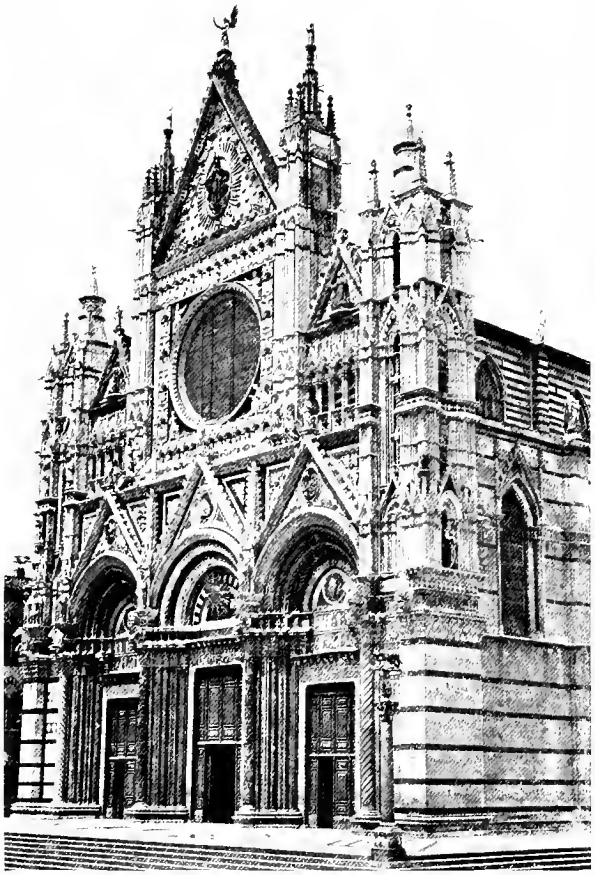
The two churches of the same monastic orders at Venice, S. Maria dei Frari and SS. Giovanni e Paolo, built considerably later (1330–1390), have similar hall-like effects. They are of brick construction and having none of the terracotta details that are common in Lombardy, are quite plain. Their exteriors are negligible except for

the choir ends of this entire Venetian group (Fig. 309), which has the most successful attempt at a grouping of large windows. They are of extreme lancet design with tracery that is elaborate for Italian work earlier than 1400. Each window has two stories of two lights separated by a broad traceried band. The scheme of windows is similar in both churches, so that their choirs, while of the same Cistercian simplicity of central apse and four or six flanking chapels, are the most effective of their class in Italy. The interiors are vaulted in the com-

310—S. Maria dei Frari, Venice. (From photo.)

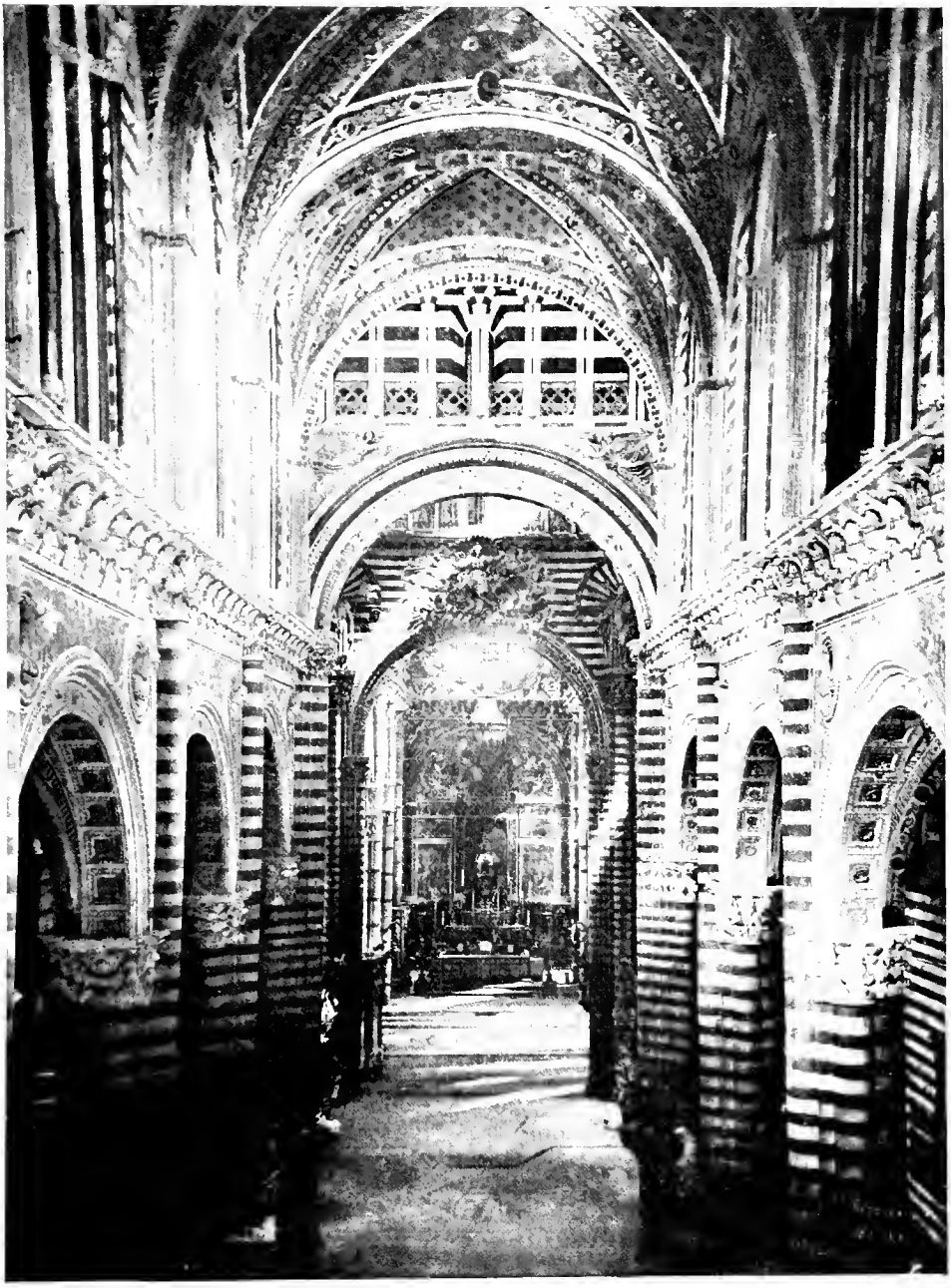
mon monastic way,—square bays in the nave and oblong bays in the aisles,—and the supports are plain columns. In Fig. 310 the nave of the Frari shows the most obtrusive system of wooden tie beams with which I am acquainted. Otherwise the effect is more symmetrical than in the Florentine churches with the exception of S. Maria Novella. The columns at SS. Giovanni e Paolo are slenderer and give a somewhat more hall-like aspect to the interior, which is bisected in the same disconcerting manner by four series of wooden tie-beams, as was also S. Anastasia at Verona. Other Venetian churches of similar style are S. Gregorio and S. Stefano; also S. Niccolo at Treviso and S. Lorenzo at Vicenza.

In the monastic churches that have been described there has been hardly any question of local schools, partly because the monastic architects were sent from one city to the other, as required, and partly because of the absence in them of the decorative details that form so large a part of the special features of any school. But this simplicity is largely eliminated when we pass to the study of the cathedral churches. They were richer in sculpture, both figured and decorative and in architectural details. They are also less consistent in the use of the pointed arch. Probably the survival of Romanesque and classic forms in this class of building was due to the greater strength of tradition among the lay guilds of artists and artisans who built them. The earliest to which we can even tentatively apply the name "Gothic," is the cathedral of Siena.



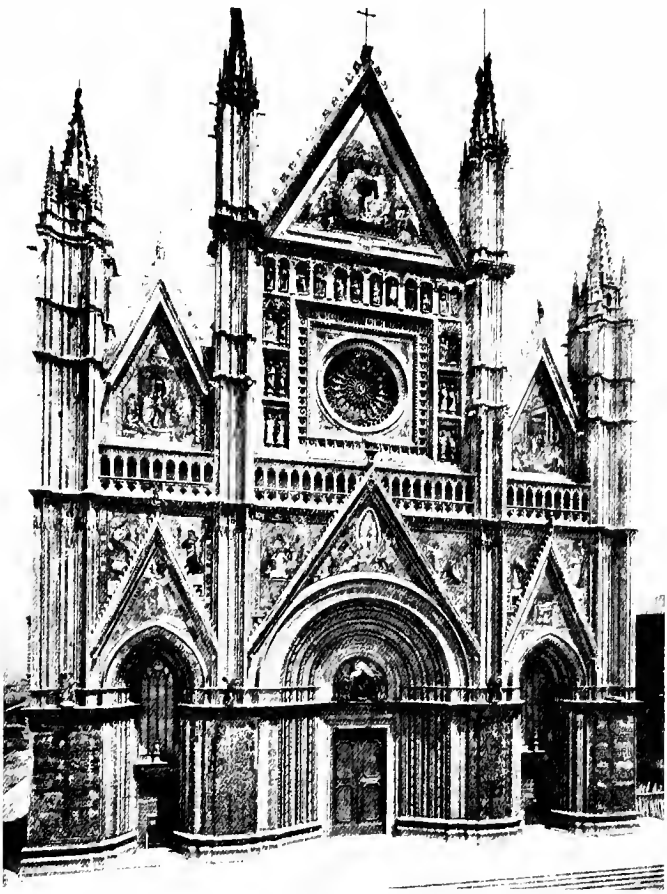
311—Cathedral of Siena: façade. (From photo.)

The cathedral of Siena, begun in 1245, is a brilliant piece of hybrid design, more Romanesque than Gothic and with an infusion of classicism. The body remains as it was originally planned from the transept and its dome to the façade; but the choir was lengthened, not long after its completion, early in the fourteenth century. This was for a peculiar purpose. The ground sloped sharply down at the rear and it was found that the baptistry could be built, in lieu of crypt, under



312—Cathedral of Siena: view from gallery. (From photo.)

the choir if it were lengthened to the extent of two bays. When this was done the apse was given a broad, square end which was designed as a second façade, with triple portal on a much lower level than the western façade, and through which one passes into the baptistry. A second transformation was planned soon after and commenced, but never carried to completion. It was to enlarge the church

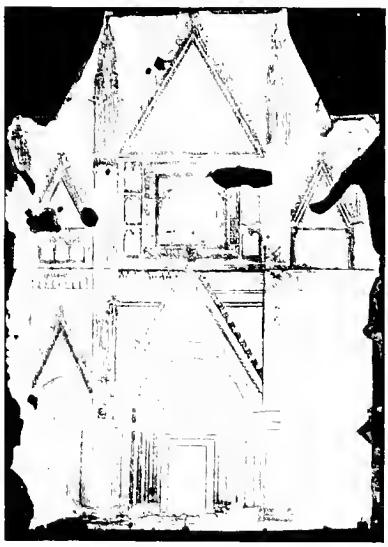


313—Cathedral of Orvieto: façade by Lorenzo Maitani. (From photo.)

by building a new nave at right angles to it, and turning the old building into the transept and choir of the new cathedral. The new work was begun in 1340 but stopped by the frightful pestilence of 1348. The two bays which were finished and vaulted, the windows and doorways, show a purer and more symmetrical art than that of the old cathedral and a closer adherence to Gothic design. The contrast of

black and white marble was considerably modified. There were only five bays, as in the old nave, but their span was forty feet.

The façade, which we may suppose to have been designed soon after 1250, was commenced in 1284, and is ascribed to Giovanni Pisano. It is perhaps the earliest highly decorated and originally designed Gothic façade in Italy and well worth study (Fig. 311). Its triple division is marked by gables and buttresses. The central buttresses are illogically started at the line of the aisle-roof and are less prominent than the corner buttresses which are given the aspect of towers with spire and corner pinnacles. The wheel window is a Romanesque survival and not an imported feature and is set in a square frame in place of the northern arcade. The sculptured ornament is rich but evenly distributed and does not admit of figures of architectural character in the portals. While the flanks of the church are simple there is not the disagreeable contrast to the façade that we will find at Orvieto. The tall heavy campanile of Tuscan Romanesque, which stands at the transept, has the same alternation of black and white as the interior and the nave walls. Evidently the more sparing use of black in the aisle wall is a later addition at the time of the new work on the proposed nave.



314—Original project for façade of cathedral of Orvieto, in c. 1295. (From Fumi.)

In the interior the (Fig. 312) black and white is dazzling. The vaulting is Gothic; the piers are Romanesque with square cores faced on each side with a half column. There is nothing Gothic in the heavy, round arcades, with coffered archivolts. The main difference between this and a vaulted Lombard interior is the greater height of the supports and the tendency to raise the aisles in order to produce a hall-like interior. The dome, however, is a very important feature and its treatment is novel. It is the first time that a dome was built wider than the nave—almost as wide as nave and aisles. Then its plan is irregular, a hexagon turning into an oval through a dodecagon which is formed by six large squinches. The dodecagonal section

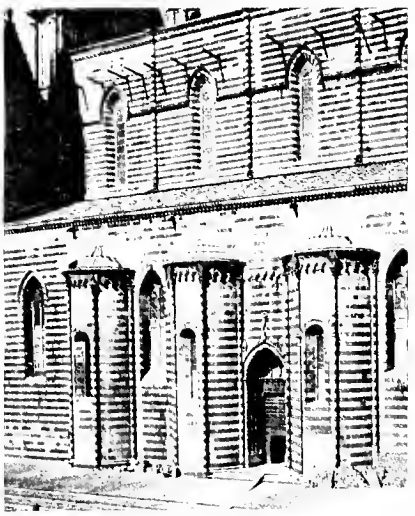
or drum is decorated by an open gallery of shafts supporting an arcade enclosing statues. We have here, quite distinctly, a prototype of Brunelleschi's Florentine dome, not only in its importance in relation to the plan but in the way it dominates the exterior. Ingenuity is shown in the way the vaulting compartments adjoining the dome are adjusted so as to furnish the most effective counter-thrust.

We must here consider the cathedral of Orvieto, although there is little that is Gothic about it except the façade. This façade is an

315—Detail of portals, Orvieto cathedral. (From photo.)

extraordinarily rich combination of color and sculpture with a marked architectural framework. One almost feels that it was planned by a goldsmith—several Italian architects were also goldsmiths—it is so like an (Fig. 313) enamelled reliquary. It is probable that Lorenzo Maitani of Siena designed it and this explains its similarity to the Sienese façade. Two original drawings for the façade remain in the *Opera* of the church: one of these as (Fig. 314) carried out. The four buttresses are designed with more unity than those at Siena and give almost the effect of towers with corner turrets and central spire. It

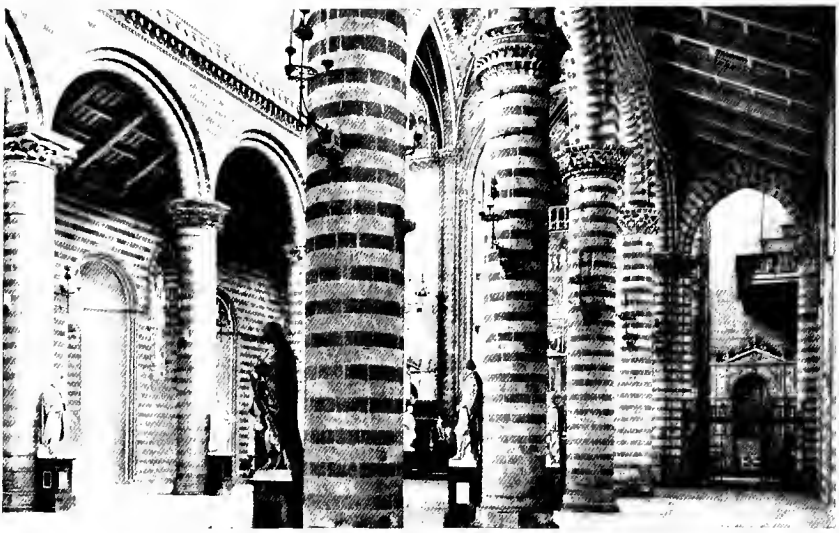
is a concession to transalpine design. The upper gables and those above the portals and the adjoining wall surfaces are covered with mosaic pictures, religious scenes culminating in a "Coronation of the Virgin." There is no façade existing in which an architect can study so well the use of strong and broad expanses of color. The statuary is concentrated around the really fine rose-window. The four buttress-piers have their lower surfaces covered with the most delicate scenes in relief sculpture. The relief is so low that it hardly affects the architectural lines. This unique decoration is in itself one of the most beautiful works of Italian sculpture. One of the cleverest features is the open gallery that bisects the design. In Fig. 315 is a detail of the central portal, showing the combination of the mosaic inlay of the Roman Cosmati school and the work of the Tuscan stonecutters. It has an effective play of light and shadow. Very similar is the beautiful portal of S. Fortunato at Todi.



310—Exterior of nave, Orvieto cathedral. (From photo.)

In Fig. 316 we see the section of the flank of the church to the right of the façade. It shows great meagreness. There is no attempt to make the body of the church harmonise with the façade. The wart-like chapels are placed with a curious disregard of the columns of the nave: they are a later addition. The apse and transept are perfectly plain and square ending. The interior is not vaulted except at apse and transept (Fig. 317), so there is no excuse for describing it under Gothic architecture. There is, however, something so original in the capitals that one is given in Fig. 318. The treatment is an extraordinarily belated adaptation of Byzantine methods of stone cutting with sharp and undercut foliage of schematic type. Their piers are immense columns and they support round arches.

The ultimate step in the type of three-aisled hall church is illustrated by the cathedral of Perugia, built in the early part of the fourteenth century in a style somewhat closer than usual to trans-



317—Orvieto cathedral: interior. (From photo.)

318—Capital of nave, cathedral of Orvieto. (From photo.)

alpine churches in Southern France, Germany, and Catalonia. The piers are octagonal and unusually slender for Italian supports—though not when compared to those of some Spanish and French hall churches, or with the similar piers of S. Francesco at Ascoli Piceno. The aisles are only half the width of the nave and in order to lower the crown of the central vault sufficiently to place it on a level with that of the aisles, the transverse arches are made semi-circular. A single low roof covers the entire width. The forms are simple, but the out-

319—Interior of S. Fortunato, Todi, from aisle. (From photo.)

lines and proportions unusually good. The common opinion that the church was entirely rebuilt after 1447 is improbable and not satisfactorily proved. Of similar hall type and worked out with even greater structural skill is S. Fortunato at Todi. The view from the right aisle in Fig. 319 shows well articulated slender piers, a skillfully contrived irregular vaulting of even crowns and with higher cells toward the outside as a help to the buttresses. The chapel arcades give the effect of five aisles. It is a work of the early fourteenth century. Midway between this extreme form and the Florentine type, is the symmetrical interior of the cathedral of Verona, with piers that

have the same eight engaged shafts as S. Fortunato, but are heavier and with larger capitals. The vaulting is also well-planned, the wall ribs springing from a higher level. The clearstory is dwarfed by the great height of the aisles and the wide span of the arches (Fig. 320).

It was to be expected that the Tuscan schools of Pisa and Lucca with their brilliant use of different-colored marble facing and incrustation would produce some charming examples of Gothic decoration if not of construction. The heroic period of these towns had passed, however, and the Gothic work is on a small scale. The works by the Pisani (Niccola and Giovanni) are the most artistic.

320—Verona cathedral: interior. (From photo.)

The chapel of S. Maria della Spina is usually selected as the most decorative combination of pinnacles, niches, and gables, but the real masterpieces are the Campo Santo, also at Pisa, and the cathedral at Lucca. The cloistral court of the Campo Santo is one of the most beautifully proportioned (Fig. 321) designs in Italy, and it expresses the Gothic spirit better than any other work by a native architect(1278–83).

The cathedral of Lucca is (see Vol. II, Fig. 263) externally a piece

of pure Romanesque, but the interior, while round-arched, is as un-Romanesque as the Campo Santo (Fig. 322). Its gallery has delicate proportions correspondingly full of lithe symmetry. It was in 1308–1320 that the reconstruction took place resulting in these Gothic modifications, especially the lengthening at the choir end by which the three-aisled transepts were added. It is to be noticed that the stone-cutting of the cathedrals, for which the lay guilds of stone cutters were responsble, is almost always far more perfect than that of the monastic churches whose architects and workman did not have as thorough a technical training. This is true at Siena, Orvieto, and elsewhere.

321—Arcade of the Campo Santo, Pisa. (From photo.)

Two buildings must be here described which more properly belonged in Vol. II with the Romanesque monuments.

The cathedral of Palermo was begun in 1170 and consecrated in 1185, so that it was contemporary with the church at Monreale, described in Vol. II (p. 261). It was quite in the same style without a trace of Northern Gothic in its original portions, as we do not consider pointed arches in the nave in themselves Gothic features. The interior has been modernized, but it is worth recording here that its

original architects attempted what I believe to have been an absolutely original scheme. They employed the usual triple division, but the pointed arches of the ten bays rested not on the usual single columns but on a square group of four free-standing shafts with common bases and abaci, a scheme which shows that a vaulting system was planned. To imagine the effect one may take the four shafts of the angle-piers in the Monreale cloister or the Vercelli (S.

322—Cathedral of Lucca: view across transept. (From photo.)

Andrea) cloister and magnify them. The effect must have been extraordinary.

The exterior of the cathedral, though marred by additions and restorations, retains a large part of its original lines and details. It is quite un-Italian in its organic use of towers; and almost German in making two groups of them, one at each end.[1] The upper section at the east end is an addition of really Gothic design. The battle-

[1] Compare, however, for Norman influence, the towers of Molfetta, Bitonto, and Bari cathedrals.

ments, corbelled frieze, and clearstory arcading are distinctly Oriental features.

A second masterpiece of Sicilian art was left to be described in this volume though it also belongs in Vol. II (Fig. 323). It is the cloister of the church of Monreale, the most interesting of its class in Italy as well as the most baffling in its design. It was built in about 1176, on a square plan of about 140 feet, with twenty-six pointed arches on each side, supported by coupled shafts except at the angles which have groups of four colonnettes. The peculiar heterogeneousness of the semi-Oriental Sicilian style seems to be responsible for the illogical design. Arcades and shafts are obvious misfits, as if two different designers were in charge of each section. One would

323—Cloister, Monreale. (From photo.)

expect supports in the form of piers with a torus moulding on the inner faces corresponding to that of the arcade which actually projects entirely beyond the plinth of the capitals. The plain surface ornament on the arcade contrasts with the rich decoration of the capitals and shafts, some of which have mosaic inlay, others a conventional pattern. It has been suggested that the arcades are older than the supports, but this is, of course, structurally impossible and the only excuse for it is the painful lack of unity in the design

The cathedral of Florence, Sta. Maria del Fiore, was planned on a smaller scale than the building we now see, by the architect Arnolfo, in 1294. The plan was changed, mainly by the architect Talenti, and the church was built largely during the latter part of the fourteenth

century. It is characteristic that while the total length was increased to 480 feet, and the greatest width at the transept to 300 feet, the number of piers was not increased, but their arch-span was widened about fifteen feet. This expressed part of the difference between the proportions of the thirteenth and fourteenth centuries, and the decreasing beauty and increasing bareness of the interiors. Another interesting point is that it reproduces more closely than any other cathedral the monastic type, with an added richness of decoration.

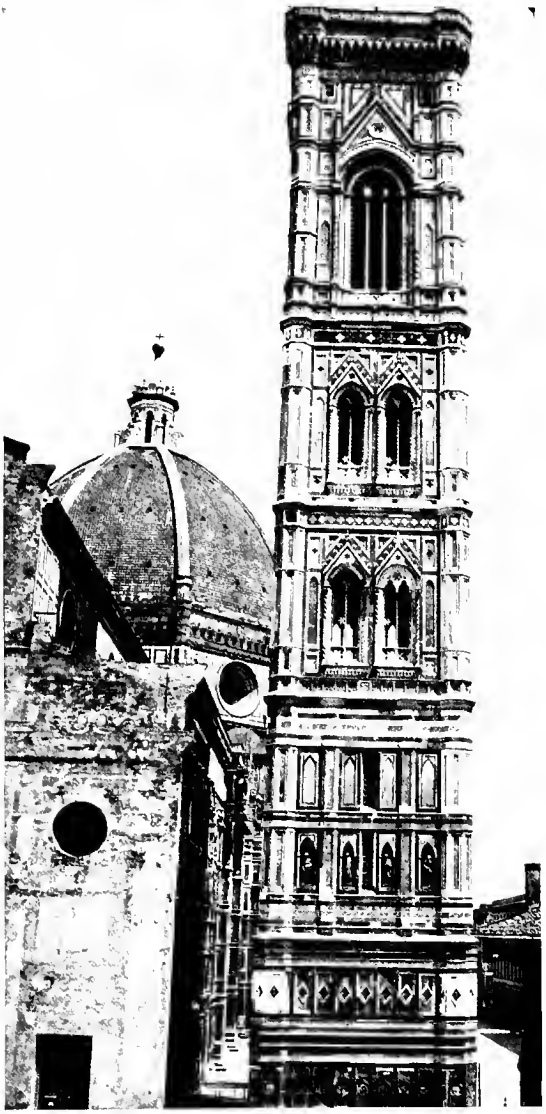
The plan is an unusual one. It is not Italian. Heretofore we have

324—Cathedral S. Maria del Fiore, Florence, before the new façade. (From photo.)

seen mainly the Cistercian scheme or its modifications: the central chapel and parallel flanking chapels forming a plain and insignificant choir. But at S. Maria del Fiore a monumental form of tri-foil choir and transept is developed, with pentagonal outline, heading a body with only four enormous bays. This choir plan suggests the influence of the school of Cologne. We notice, both outside and inside, how strongly Italian artists cling to tradition. The brick structure is completely incased in a veneer of marble slabs and strips forming simple geometrical patterns after the fashion of the three preceding centuries, as at S. Miniato, Empoli, etc. (Fig. 324). In the piers, the

use of thin pilasters in place of engaged shafts and the super-capitals in the form of segment of a classic frieze, show imitation of classic and Romanesque features, as does the heavy main cornice with its corbels.

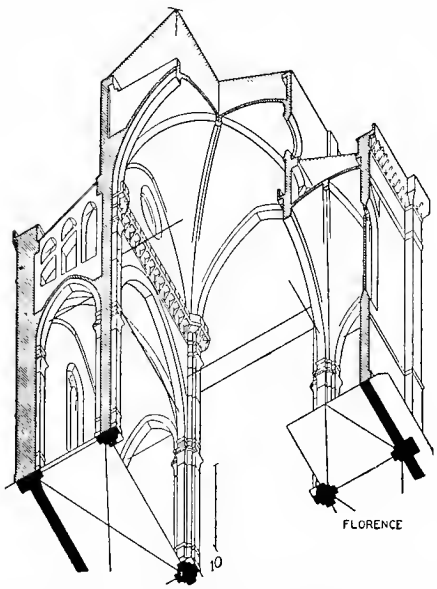
The exterior effect is far more successful than that of the interior. The juxtaposition of tower and façade give an excellent balance to the dome. The unity is not ruined, as was so often the case in Italy, by a concentration of decorative features on the façade. Of course the veneer of the façade is modern and from a nineteenth century design (Fabbris). We can, perhaps, infer what the original scheme was from the design of Giotto's tower (Fig. 325) and drawings of the old façade. In fact, contrary to all Italian precedent, the choir end is the more interesting.



325—Giotto's Campanile, Florence, showing corner of cathedral façade before new work. (From old photo.)

In judging the interior (Fig. 326), one fails to realize the great height, 135 feet, slightly surpassing that of Amiens cathedral. This is partly due to the immense span of the arcades (56 feet) and partly to the lowness of the clearstory above the main cornice and the absence of a triforium. By confining the clearstory to the space between the wall arches of the vaulting the architect condemned himself to the use of

insignificant oculus windows in place of large traceried openings. Probably this was done from fear of raising the vaulting any further. The windows of aisles and choir are narrow, with single and double lights. There is no interesting detail in the interior. The design of the foliated capitals, in their three unrelated superposed tiers, is commonplace and of poor workmanship. One may consider the cathedral of Florence as the ultimate effort of the purely Italian school to express itself in Gothic terms as it understood them, and as far as it was willing to adopt them. Before examining how a different policy resulted in the Cathedral at Milan, a few minor types must be studied.



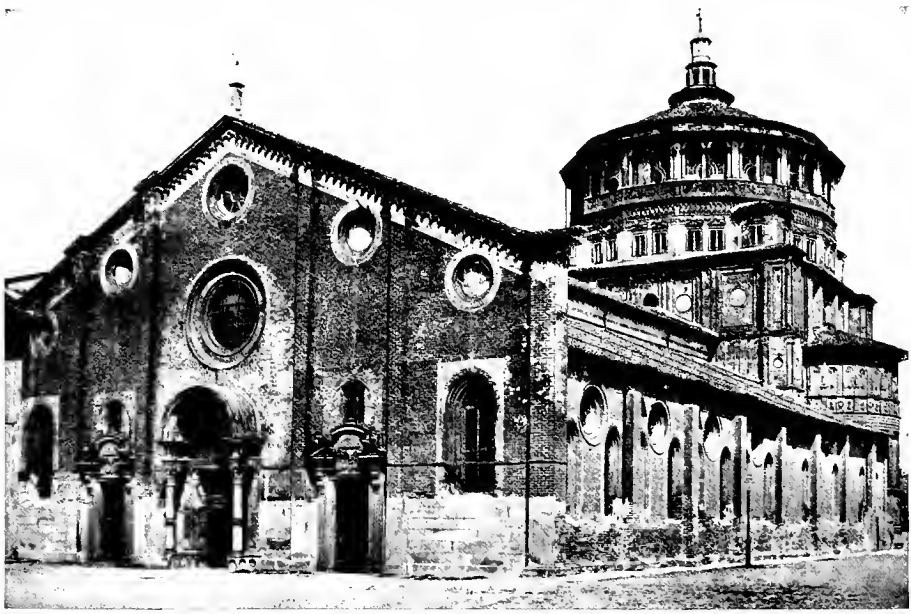
326—System of cathedral, Florence. (From Choisy.)

A reference, at least, should be made here to the large church of Sta. Croce in Florence, though it is no more Gothic than Orvieto cathedral. The nave and aisles are covered with wooden roofs: the nave being wider than if it were planned for vaulting. Yet the heavy and widely spaced octagonal piers, the high pointed arcades of the nave, the pilaster strips resting on the capitals, are features borrowed from the vaulted churches. Notwithstanding its size (361 by 123 feet), it is a characterless and inartistic building, both outside and inside. The unfinished façade was faced in modern times. There are many churches in Italy and some in Germany and Spain where the wooden roof persists throughout the Gothic age. S. Domenico in Siena is a one-aisled example.

The brick and terracotta style of Lombardy is expressed, with all its shortcomings, in the exterior of S. Maria delle Grazie at Milan. This is not the place to speak of the dome and transept added by Bramante in Middle Renaissance style (Fig. 327). The façade and flank are similar to others in this region, at Crema, Cremona, Bergamo, Brescia, etc. It is a sadly mechanical style without charm of detail or design. The attempt at an aisle clearstory with an oculus above

two lancets—the basis of a typical Gothic window, is ludicrous in its clumsy lack of unity. Of course there were changes made twice in the lower part of the façade during the Renaissance, which can easily be recognized.

The province of Bari and neighboring portions of Apulia contain magnificent specimens of Romanesque, which were only referred to in Vol. II. An architect will find some of the most superb of medieval detailed work in this region, especially at Bari, Ruvo, Trani, Bitetto, Bitonto, Matera, Barletta and Altamura. The portals and windows are the richest in Italy in their sculpture. The latest of these works



327—S. Maria delle Grazie, Milan. (From photo.)

trench on the Gothic period of the thirteenth century and I cannot refrain from mentioning the portal of the cathedral of Altamura, which is a perfect specimen of southern Gothic design. It is strictly a development out of the Byzantine Romanesque type of this region. Its effects are obtained by sharp contrasts due to heavy undercutting and not to gradations of surface treatment. The keynote is a broad expanse not broken up by parallel lines—a treatment that one might really call anti-Gothic. In fact there is not in all the South a single church with structure and decoration that could be termed purely Gothic even by Italian standards. There are, to be sure, such ap-

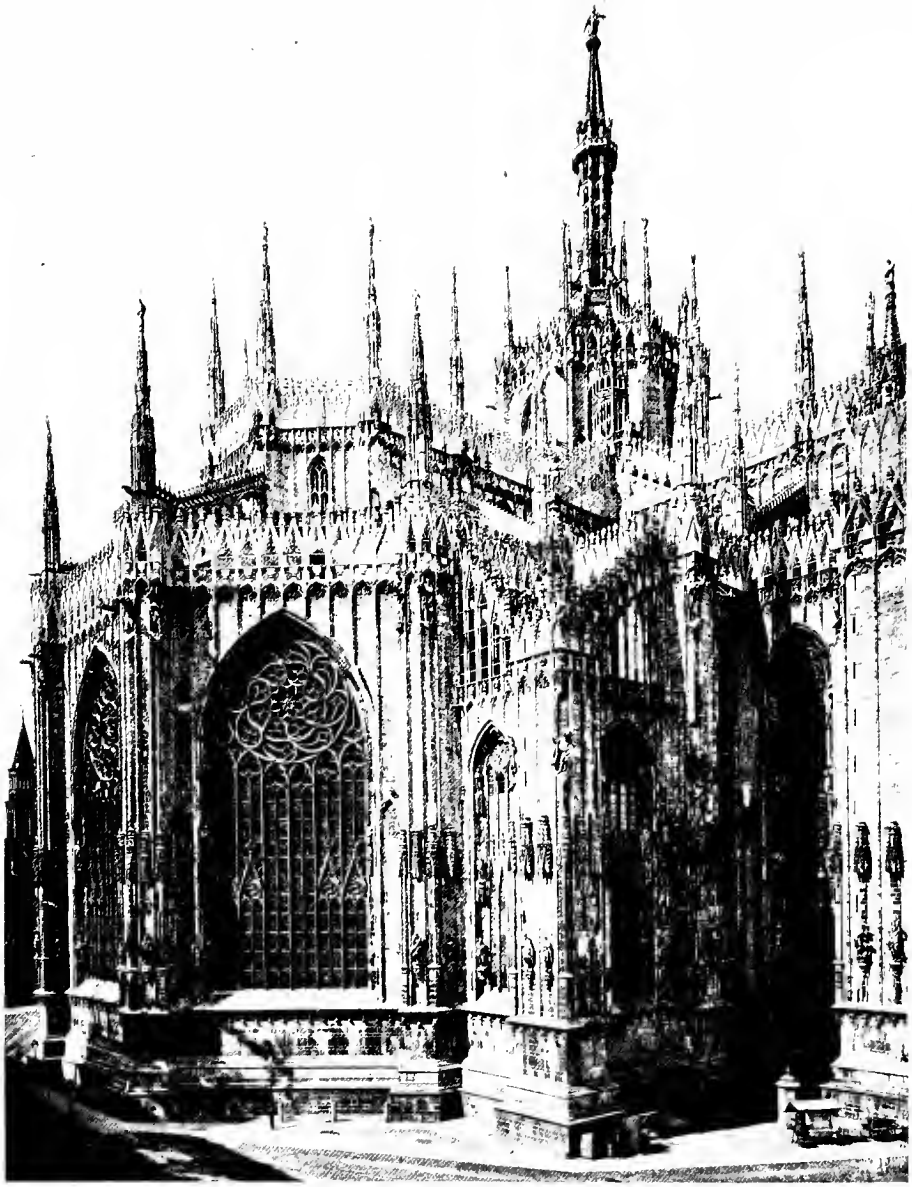
proaches to it as the picturesque rock-church of S. Michele at Monte Sant' Angelo (1274) with its single nave of three bays vaulted in the Gothic manner.

The cathedral of Milan is the only Gothic church in Italy that can be placed beside the great transalpine churches. With all its faults it is one of the great buildings of the world. In bulk its main rival is the cathedral of Seville. It is the only large church with an exterior entirely of white marble. But it is not only impressive and spectacular: it is also so originally individual that it cannot be likened to any other building or attributed to any school or even any nationality It is a compound of German, Italian and French characteristics. Begun in 1386, its construction was pushed forward rapidly until about 1410, and after that became intermittent. It was for a time the focus of international Gothic endeavor. This and the vastness of the undertaking make it a fact of peculiar significance that the bulk of the accounts, reports of meetings of the building committee and of architects, official correspondence and other records have been preserved and published, and that a number of early drawings, sketches and diagrams still exist in the original or in published copies.

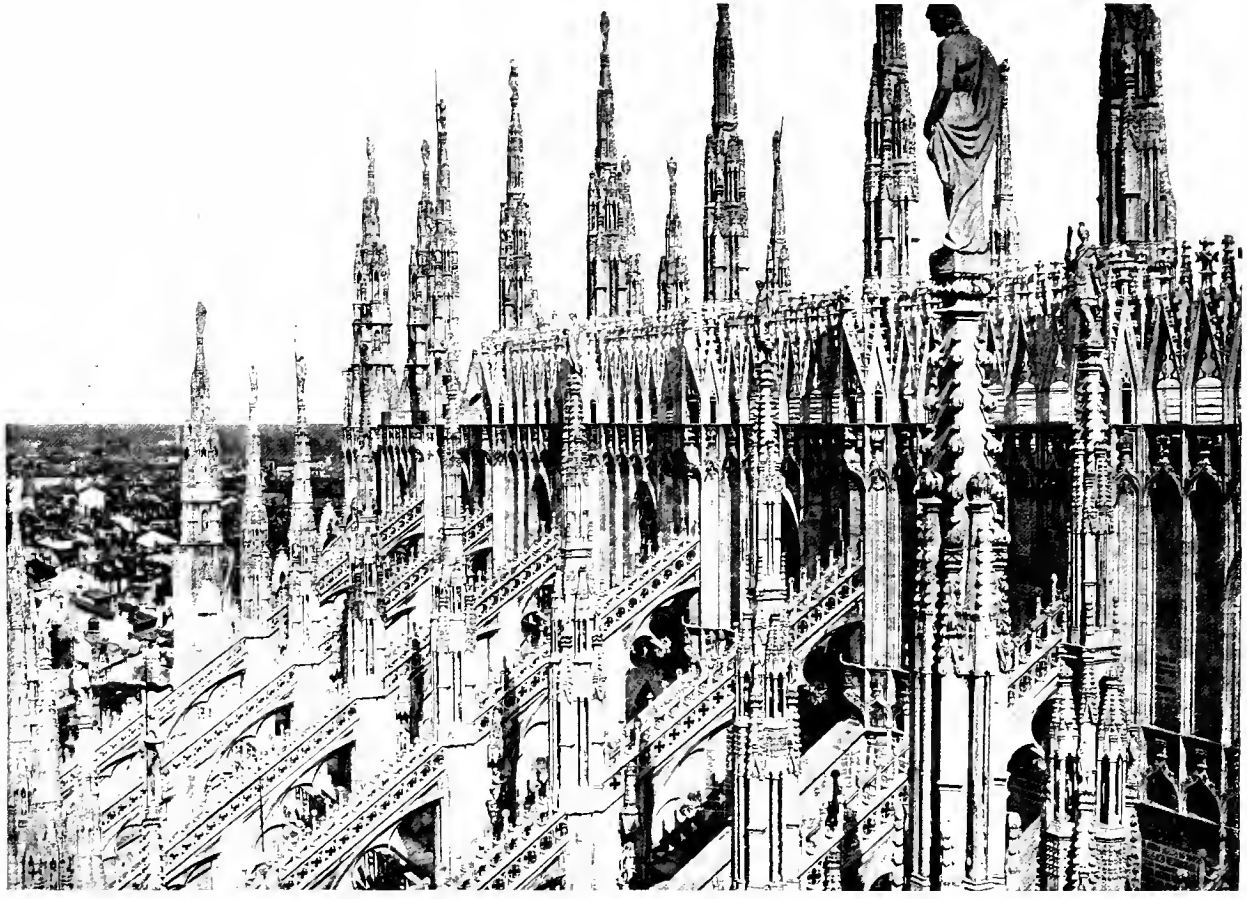
Now, there are several indications that in the fifteenth, and perhaps, even in the fourteenth century, the Italians considered not France but Germany to be the fountain-head of Gothic architecture. It was the opinion of that lover and patron of architecture, Pope Pius II. In his study of Germany, before he became pope, he states that in his opinion the Germans were the greatest architects in the world. He speaks with the greatest admiration of the cathedral of Strassburg and other masterpieces of German Gothic. He obliged the Renaissance architect who built for him the cathedral at Pienza to follow German models in the interior. A century later Vasari, in the introduction to his "Lives," calls Gothic architecture, Germanic. There can hardly be a question that this feeling was largely if not entirely due to the Cathedral of Milan. The proof of this is given by Cesare Cesariano in his translation and commentary on Vitruvius. To illustrate symmetry in architectural design he uses the cathedral of Milan, both in plan and elevation, stating that the geometrical ratios that underlie its proportions can be applied to any buildings. The system here used he frankly states to be German: "the method used by the German architects" in the church of Milan. This statement he makes of the ground-plan. He repeats it substantially in the title to the plan itself

which was made, he says, "after the German manner based on the triangle and square." Each of his two elaborate sections of the cathedral is labelled in similar fashion as "German." They are of extraordinary value because they seem to be facsimiles of the original drawings for the cathedral made by some German architect before 1392 (probably c. 1387), because in 1392 the proportions were adopted that were followed in the building whereas in these two drawings the proportions are quite different and more purely transalpine. As the drawings themselves have perished these woodcuts are about the most valuable records of the application of geometry to Gothic architecture. Their early date is confirmed by a sketch made in Milan by Antonio di Vincenzo, the architect who planned the Church of S. Petronio at Bologna. This sketch is thought to have been made in 1390. It agrees in its measurements with Cesariano's illustrations; that is, it is based on the equilateral triangle. There is another record of the stage anterior to 1392. It is a sketch or diagram made by a prominent architect named Stornaloco, called from Piacenza in 1391 to give advice as to the right proportions for the elevation. It has never yet been suggested that Cesariano's diagrams were made from early drawings. They have been stigmatised as absurd and as a "joke." But I have applied them successfully as a key to the design of other Gothic churches.

The matter of Milan cathedral is the most complex in Gothic history. Also, there is no certainty of opinion as to the origin of its peculiarities. The reasons will appear from its history. When begun, in 1386, there is no question that the plan for the entire structure was made. As usual, construction commenced at the choir. It must be borne in mind, furthermore, that the lower end of the nave was never vaulted until the seventeenth century, nearly three hundred years later! The designer is unknown, but it is probable that he was a German. The Building Committee, as the documents show, engaged and dismissed master-architects with vertiginous rapidity. It was found that only German or French architects had the requisite scientific knowledge to direct the work, yet there was such national antagonism to the transalpine scientific point of view that every foreign architect was opposed and thwarted and finally dismissed. The Italian cry was art *versus* science! Until the next was secured an Italian stop-gap was engaged, with whose mistakes the next foreign incumbent was obliged to contend. Leading architects from Strass-



328—Choir of cathedral, Milan. (From photo.)



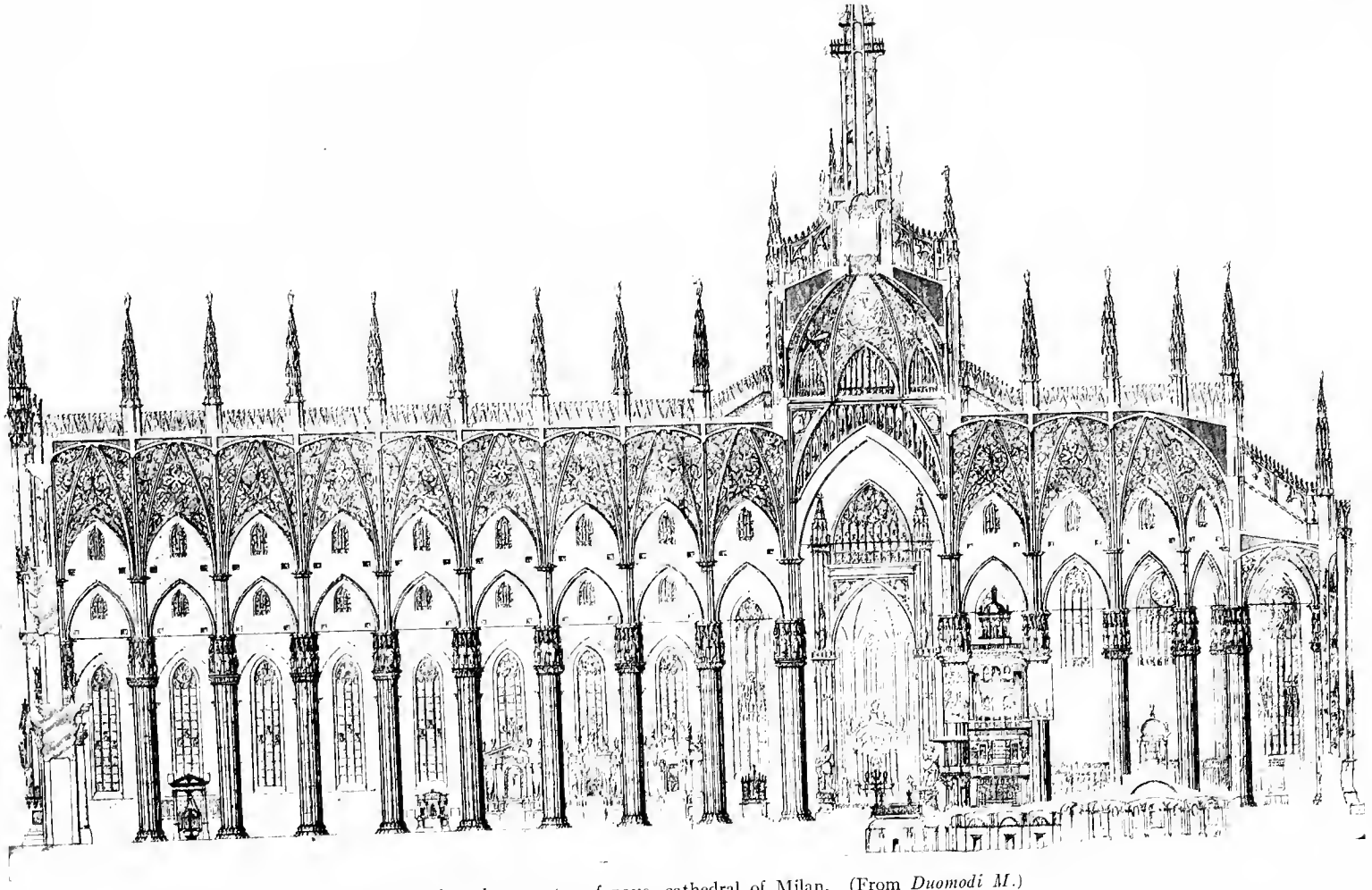
329—Cathedral of Milan: flying buttresses and roof. (From photo.)

burg, Ulm, Cologne and Paris were called. Milan became a notorious architectural storm centre.

The plan is a Latin cross with short transept, short polygonal choir and a five-aisled body. German influence may account for the lack of dignity and size of the choir, which is without chapels, though it has an ambulatory. The five aisles may be derived from the plan of Cologne Cathedral. But the characteristic of the interior is its hall-like effect, and as this is found in Germany and Southern France and had become long since acclimated in Italy, one hesitates to which of the multiform influences to ascribe it. The oblong plan given to the vaulting compartments of the nave would in itself be conclusive of a non-Italian origin. The work began at the choir end, and was partly under the Parisian architect, Bonaventure. There is documentary evidence that the design of the magnificent windows given in Fig. 328 was his own, slightly modified.

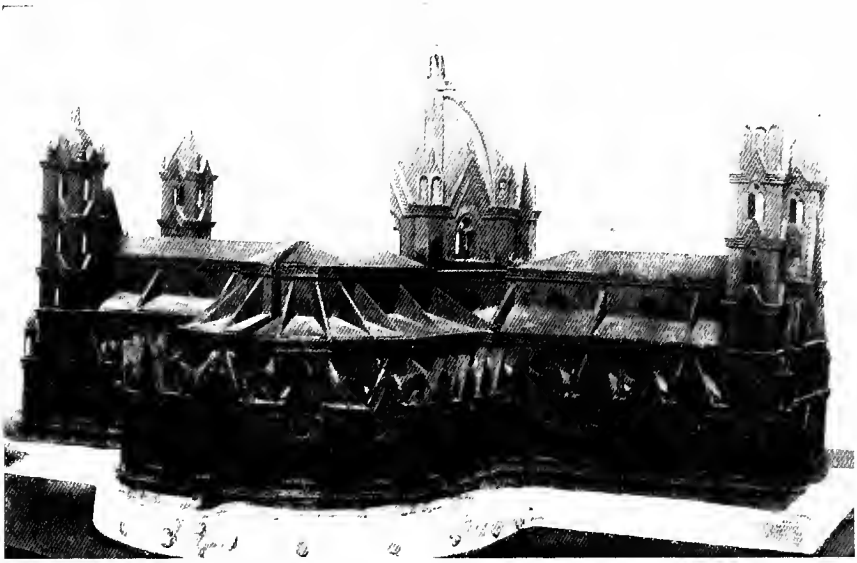
The special features of the exterior may be said to be the absence of towers, the forest of pinnacles, the dominant effect of the high side-aisles, which almost conceal the buttresses and the nave wall; and, finally, the balustrade parapets formed of a succession of minute open gables, with strong vertical effect (Fig. 329). The original scheme for the façade, as we can see from the buttresses, was merely a development of the Siena scheme, applied to a five-aisled building. The choir was consecrated in 1418. Several years previously it had been decided to shorten the plan by three bays. The nave was not completed until the second half of the fifteenth century; the central lantern was not begun until 1481 and it was so badly constructed that a reconstruction was necessary in 1490 under the direction of the famous engineer-architect of the Renaissance, Francesco di Giorgio. Inside the Gothic lantern is a dome, which follows the Romanesque scheme of not exceeding the width of the nave. Buttresses connect it with a slender central spire (in part of 1750) which is three hundred and fifty feet above the pavement and yet is not as effective as it should be, owing to poor composition.

If one considers that the bulk of the church was built subsequently to the triumph of the Renaissance, it is only to be wondered at that there was not a stronger infusion of the new style than what we see in the doors and windows of the façade. The interior lacks the light and color given by the immense clearstories of the northern cathedrals with their stained glass. The continuity of the lines of grouped piers and



330—Section along centre of nave, cathedral of Milan. (From *Duomodi M.*)

vaulting shafts is interrupted by the tabernacles that form super-capitals, a vicious feature. The transverse vaulting arches are extremely pointed and these and the diagonal ribs are heavy. Aside from their super-capitals the piers, with their eight shafts encircling a central column, are finely proportioned; the best feature of the interior. To do justice to the original designers several points must be remembered: (1)the vaulting of the nave was to have been higher and the clearstory windows presumably larger; (2) the nave was to have been con-



331—Wooden model of S. Petronio, Bologna, as originally planned, seen from apse end to show parts never built. (From photo.)

siderably longer; (3) the ideas of the transalpine architects were constantly thwarted by the Building Committee and by jealous Italian architects. The long section in Fig. 330 will make further description unnecessary. It must be remembered that the present dome-tower is a design by a Renaissance architect after 1480, and that it was originally planned as square. It is also a fact not sufficiently appreciated that the bulk of the over-elaborate decoration of the upper part of the exterior is as late as the seventeenth century or later.

In contrast to the cathedral of Milan, the church of S. Petronio at Bologna would have represented, on just as large a scale, the most advanced and finest type of native Italian Gothic. It was planned at about the same time (1390), and was to have been about six hundred

feet long. The plan was more symmetrical than Milan, with a choir that would have been unique in Italy for its aisle and chapels and its two bays; unique also in its extremely long transept. Its dome was planned on a large scale. Only the nave was built, to the opening of the transept, so that the present interior is out of scale and

332—Interior of S. Petronio, Bologna. (From photo.)

does not do the architect justice. Fig. 331 shows the original plan, and is taken from an existing wooden model made by a later architect (1514), probably reproducing substantially the original model made in 1390 by the architect, Antonio di Vincenzo. Its scheme has been compared with reason to that of Pisa cathedral, enriched by the development of choir and transept. Instead of five aisles, as at Milan, there are three aisles with a continuous row of chapels in

place of the outer aisles—a feature which the cathedral of Milan barely escaped. The wide spacing of the piers is of the usual Italian type and involves so high an arcade as to sacrifice the clearstory. Both the design and the detail of the exterior are far better. The large aisle windows have some of the best tracery by an Italian hand. Comparing the finished part of the façade with the design in the model with its five gables and remembering that the marble decoration was in charge of Jacopo della Quercia, one of the three greatest sculptors of the earliest Renaissance, we can see how it would have been when completed the most beautiful in Italy; not as rich as that of Orvieto but in purer taste, and far more artistic than the patchwork style of the Tuscan churches. The reliefs around the three portals are masterly, both as works of sculpture and decoration. Work on it was suspended soon after 1430, when about thirty feet of the marble facing had been completed. While the aisle windows next to the façade are so thoroughly Gothic, it is curious that the portals should have lintels surmounted by a round arch. In criticising the interior it must be remembered that the original vaulting was to have been considerably higher, allowing a high clearstory and flying buttresses. This was not carried out by the architect Terribiglia, when he completed the upper part of the nave toward the close of the sixteenth century. Gothic tradition was then completely lost in the matter of proportions (Fig. 332).

From its situation in the extreme north the cathedral of Como might well be expected to show German traits, but its only striking transalpine peculiarities are its piers and the arrangement of vaulting shafts; perhaps also the oblong plan of the vaulting compartments of its nave. The construction was contemporary with that of the cathedral of Milan (1396 to sixteenth century) and some Italian masters were employed on both buildings. Nothing could show better than the severe plainness of Como that the decorative scheme of Milan was thoroughly exotic. Of course one excepts from this statement such details as the exquisite Renaissance triforium windows which were not part of the original scheme. Another contrast between the two buildings is shown by the timidity with which the Italian architects planned the lighting of Como. The windows are so insufficient as to practically ruin the effect of the interior. The choir end is Renaissance.

To sum up general conclusions, it is evident that there was in Italy

no attempt to create a church design that should have external harmony and unity, such as we find in the rest of Europe, especially in France and England. The façade has often no organic relation either to the structure it masks or to the rest of the exterior. The absence of flanking towers as a part of the façade takes from it a large part of its possibilities for picturesque, imposing and varied effects. The placing of an independent tower in some relation to the building in most cases—with the notable exception of Florence—is not successfully solved. By omitting the use of flying buttresses and of radiating choirs, two main sources of rich effects in the rest of the exterior are lost. In the interiors there are several reasons for failure. We miss the exquisite carving of details so characteristic of French work; and we miss the sense of scale that governs all northern Gothic.

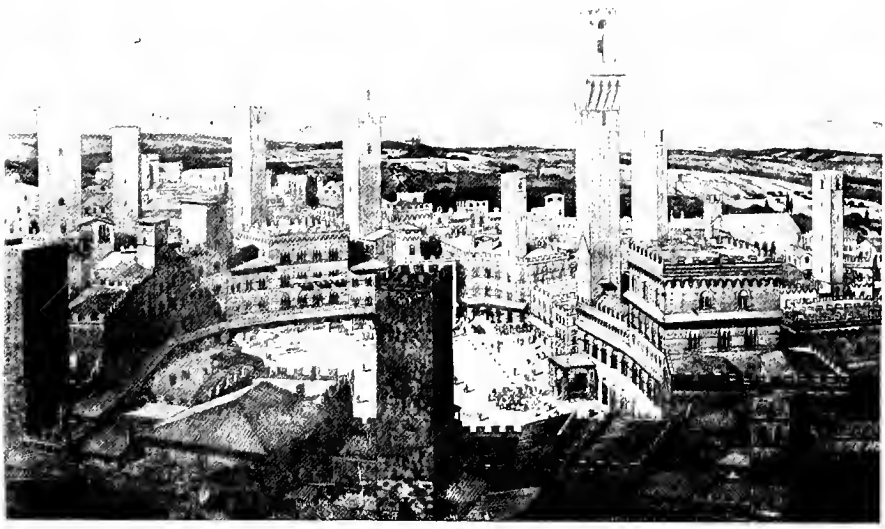
Civil Buildings.—Italian architects were successful in their civil buildings. Very few of these were referred to in Vol. II and they may be grouped together here because it is not always easy to make any distinct break between those of the Romanesque and Gothic periods; for instance, the Palazzo dei Consoli at Gubbio and the Palazzo della Ragion at Fano. There are several principal groups: the communal palaces and other public structures of this class; the feudal fortresses and castles; the private palaces and houses. Italy is richer than any other part of Europe in such buildings, so that only typical examples can be mentioned.

The extraordinary development of the free cities of Italy led to the erection of numerous public buildings for the meetings of the people as a whole and of the various governing bodies. The arrangement of such buildings varied according as the constitution was aristocratic, as in the northern cities, or democratic, as in those of Tuscany. Sometimes the larger meetings of the people were held in the open square in front of the town-hall, sometimes under an open arcade occupying its entire lower story, sometimes in a immense enclosed hall on the second floor. In democratic towns there was a great tower or belfry whose bell called a meeting of the people.

The most interesting and varied group is at Florence, with its Palazzo Vecchio, its Bargello, its Bigallo, its Loggia dei Lanzi and its hall of Or San Michele.

What is now called the Bargello, was the Palazzo del Podestà, or residence of the chief magistrate. It was begun in 1250 and is perhaps the first civic structure in Italy in the Gothic style. It has become at

present the Museo Nazionale. At first glance it is clear that a considerable portion is of later date. The area is c. 200 by 110 feet, and the plan is quite irregular. The military aspect is one that was evidently borrowed from the city walls and feudal castles, and remained a characteristic of Tuscan civil architecture, determining the lack of openings in the lower section, the use of battlements and crenelations, the concentration of decorative features on the inner court and the upper part of the structure. The tradition associates a German architect with the design. A close connection is evident with the work at S. Francesco of Assisi, in the two-light windows and in the



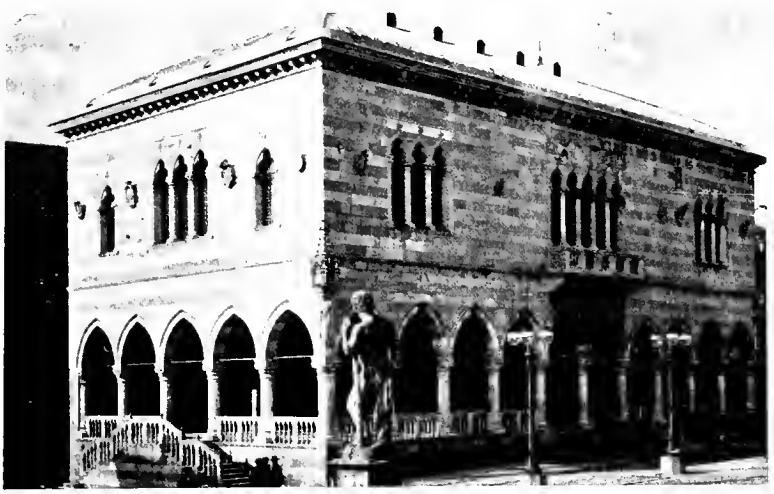
333—Restored view of the main square of Siena, as it was in the fourteenth century, with the Communal Palace on the right. (From *L'Architect.*)

bold broad vaulting of the gallery and main hall. For the student of architecture there are two features of extraordinary interest: the court and the hall. There is little that is Gothic in the exterior of the court, with its surbased round arches, except that the octagonal piers and foliated capitals are of a normal Tuscan Gothic type. But the low vaulting of the gallery, even though on a square plan, is Gothic.

A prototype of the Palazzo Vecchio is the castle at Poppi in the upper Arno valley. The court is renovated in a later style. All these Florentine buildings are too familiar to require description. Perhaps the most interesting way of studying this group in its primitive setting

is in such a reconstruction of the main square of a Tuscan city of this time as is given of Siena in Fig. 333. The Communal Palace on the right with its great tower is the only rival in Tuscany of the Palazzo Vecchio. The private palaces of the same age, with their simpler towers, such as can still be studied in the neighboring San Gimignano, are arranged about the curved theatre-like outline of the square. In the architectural details —windows, battlements, doorways, and even in the central courts, these public structures are exactly paralleled on a smaller scale by the private palaces. They show an interesting fact: that here in Siena both stone and brick were used contemporaneously and sometimes in different stories of the same building. In some parts of Italy the style was strongly affected by the material: here in Siena it was not so. One can hardly tell the difference, stylistically, between a stone palace like the Saracini in the main square and the brick Palazzo Buonsignori, of which the detail

334—Palazzo Marsili, Siena. (From photo.)



335—Communal Palace at Udine. (From photo.)

shows that if anything the terracotta led to an increased richness. A further advance was made in the Tolomei Palace by the addition of tracery in the field of the windows. Both double and triple mullions

336—Detail of Foro dei Mercanti, Bologna. (From photo.)

were common, here and in Florence. The Palazzo Marsili at Siena is a good simple piece of brickwork (Fig. 334), and the Palazzo Grottanelli combines stone in the lower with brick in the upper story.

The communal palaces at Florence and Siena, just described, taken with the somewhat later and more richly decorated Palace at Perugia, and the simpler one at Pistoia, show the Tuscan and Umbrian type of building with a solid lower story around a central court. There is another type, with its lower story entirely open in arcades, naves or galleries, which was quite common in the north and due to a different political constitution. The Town Hall at Udine in Venetia (Fig. 335) is the most artistically perfect of this class, partly because it stands

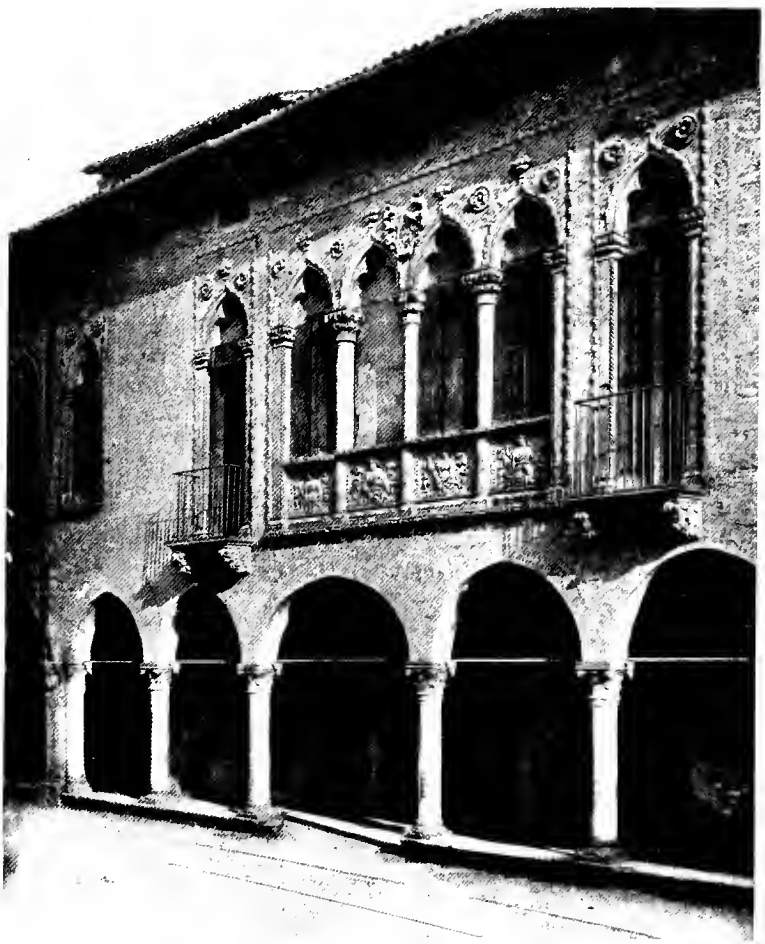
337—Palazzo del Tribunale, Verona. (From photo.)

free on all sides and partly because of its characteristically Venetian grouping of windows, its moderate polychromy and its use of columns instead of piers. The larger and better known Town Hall at Piacenza has the normal plain piers, continuous second story windows and crowning battlements, and combines brick and terracotta above with stone below; so, although also isolated, it lacks the picturesque charm of Udine. There are others of this type at Cremona, Ferrara, Bergamo, etc., and there is the charming "Broletto" at Como.

Midway between these extreme types is that with an arcaded portico and a solid nucleus, also common in the north, in harmony

with the arcaded streets. In Fig. 336 the detail of the Foro dei Mercanti at Bologna gives such a composition and is also interesting for its combination of marble details with terracotta and brick. Other examples are given in Figs. 331, 337, 343, 344, 345 and 346.

In this connection it is important to note that the custom in North Italian cities of turning all the main streets into arcaded avenues



338—Signorini Palace, Vicenza. (From photo.)

developed a special type of house and palace that can best be studied at Bologna, but also at Verona, Vicenza and elsewhere. The Palazzo del Tribunale and the Casa dei Mercanti at Verona (Fig. 337) illustrate its use in municipal buildings, and the Palazzo Signorini at Vicenza (Fig. 338) shows how it modified the Venetian type of private

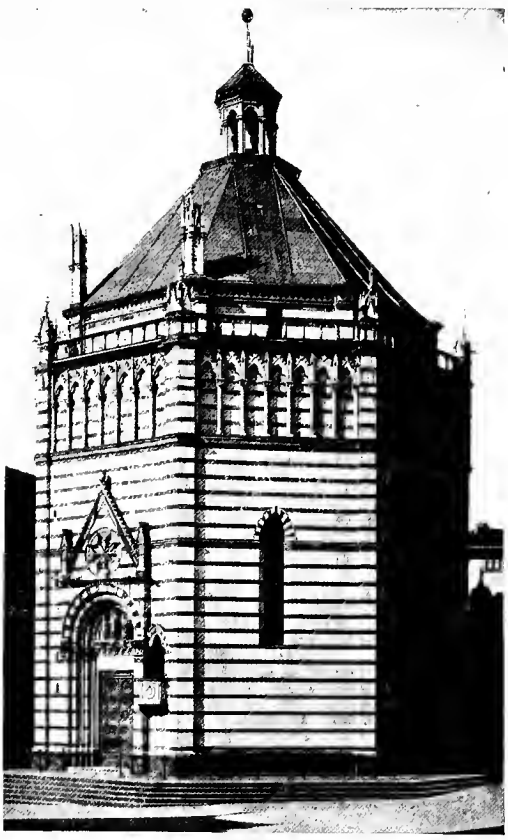
house. Sometimes a more or less crude form of wooden architrave took the place of arcades; such forms as are illustrated by the court of the Carrara palace at Padua.

Aside from the Tuscan fortified palace and the north Italian type, often with arcaded lower story, the most artistic creation was, of course, the Venetian palace, with its three sections; the highly decorated and wide centre with its balcony and wide glass area, and the two simpler and narrower wings. It is entirely a pleasure-palace, at the opposite pole from the Tuscan. Its complete decorative surface scheme of marble incrustation, slabs, tracery, balconies, etc., is also unique and was imitated only distantly in the terracotta scheme of the Venetian mainland at Padua, Vicenza and elsewhere. Among the rich variety the Palazzo Foscari is pre-eminent as a developed type just preceding, in the fourteenth century the latest flowering of the style in the Ducal Palace and Cà D'Oro Palace. There is a temptation to illustrate it by the less familiar and more unusual group of windows of the Palazzo Ariani with its effective panel of continuous tracery, and the Foscari windows are more char-

330—Palazzo Cà d'Oro, Venice. (From photo.)

acteristic of the school, yet the beauty of the Cà D'Oro (Fig. 339) work is irresistible.

In Ecclesiastical buildings outside the normal church types there were a number of classes of design that must be at least referred to. There are chapels which are planned in a special way and with artistic detail. This was especially the case in Tuscany, where S. Maria della Spina at Pisa and S. Maria della Rosa at Lucca are well-known



340—Baptistry of Pistoia. (From photo.)

masterpieces. The Baptistries, which were quite plain in Romanesque times except in a few cases like those of Parma and Florence, were the most characteristic concentric structures, ranging from the simplest forms at Volterra to the richer ones at Pisa. The Baptistry at Pistoia which is selected for illustration (Fig. 340) is one of moderate richness but good proportions, with the usual Tuscan marble polychromy.

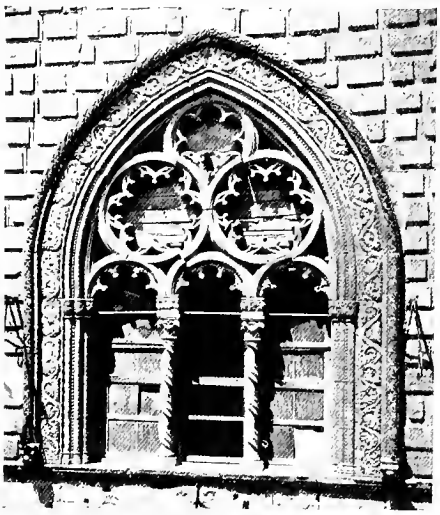
The cloisters are numerous and several have already been illustrated: those at Fossanuova (Fig. 300) Monreale (Fig. 323), Viterbo (Fig. 303), represent different sections of Italy, and to the same general type belongs the exquisite Campo Santo at Pisa. As of a type peculiar to the Roman school the cloister of S. Paolo at Rome is given in Fig. 341, with its infinite variety of coupled columns often inlaid with colored mosaic cubes in elaborate patterns.

In connection with this round-arched cloister, the fact must be emphasized that a large number of interesting works of the thirteenth

341—Cloister of S. Paolo, Rome. (From photo.)

and fourteenth centuries in Italy cannot be included under the term "Gothic" by the widest stretch of the imagination. Romanesque dominated even then in parts of Lombardy and Piedmont, Apulia and Compania: the basilical style still ruled in Rome. In Tuscany such works as the famous Loggia dei Lanzi in Florence effected a compromise typical of many Tuscan works and such as we have found in the cathedral of Siena. Only in such qualities as the new delicacy of detail and proportion, a change in the treatment of the capitals, can we trace in such masterpieces as the Roman cloisters of S. John Lateran and S. Paul's (Fig. 341) anything of the Gothic spirit. The

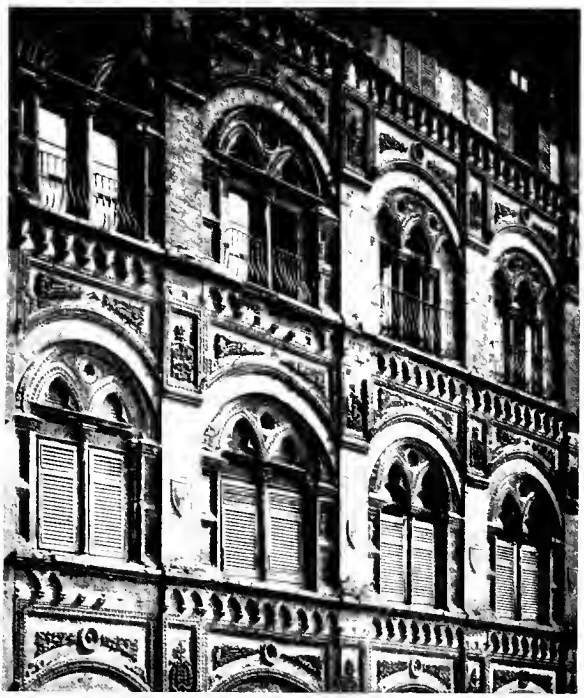
court of the hospital at Lodi is a case in point. The capitals are of pure French early Gothic design, but the rest is Romanesque in design, though the terracotta detail again is Gothic. On the other hand, had this been designed in the Romanesque period the lower arcades would have been supported on piers, not on slender shafts. Then again there is another movement in favor of architraved architecture, in the Roman school, which appears for instance in the interior of the basilica of S. Lorenzo in Rome: another work of the thirteenth century of this type is the porch of the Cathedral of Civita Castellana, which will be illustrated in Fig. 561 in connection with Brunelleschi's adoption of its design for the Pazzi chapel façade.



342—Window in Vitelleschi palace, Corneto. (From photo.)

343—Façade of Ospedale Maggiore, Milan. (From Schütz.)

The fact that church design in Italy usually did not include any towers in organic connection with the structure, made the campanile of the Gothic age as independent as they had been in the Romanesque age. But they are neither as numerous or important as they were then. Giotto's Campanile is the only rival of the Pisa Tower. Occasionally, as in the tower of S. Andrea at Mantova, there is an admirable use of terracotta in highly decorated windows and cornices. Also, but

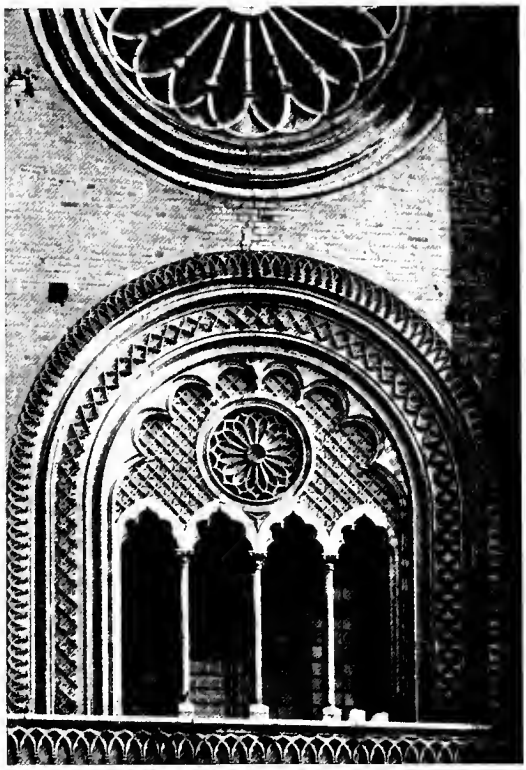


344—Pisa, Palazzo Agostini. (From photo.)

not often, there is a peculiarly felicitous design, as at S. Gottardo of Milan.

It was natural, as a legacy from Rome, Byzantium and Romanesque, that Italy should have made abundant use of brick. What is amazing, however, is to see how Gothic artists in Italy succeeded in creating a system of decoration in brickwork and terracotta which, with the help of marble colonnettes so paralleled the decoration in marble that the general effect is almost identical. This, as has been said, is well illustrated in the palaces of Siena; or for more decorative work by the Vitelleschi palace at Corneto (Fig. 342), the Tabassi palace at Sulmona, and the Ospedale Maggiore at Milan (Fig. 343), where the

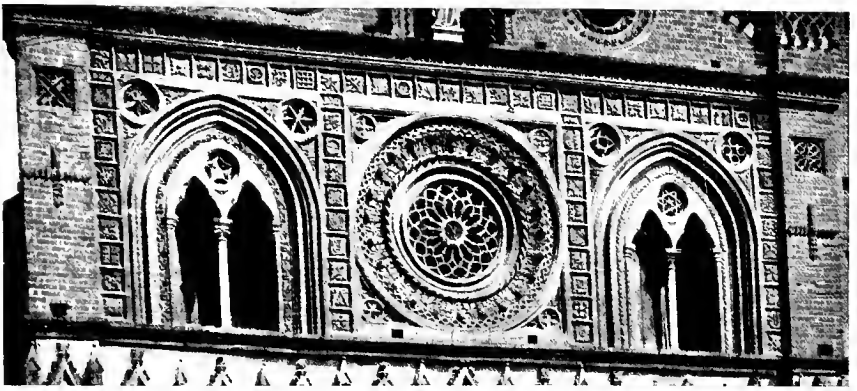
windows of stone and marble, or of terracotta, brick and marble, are so closely alike. The same is true of the similarity between the terracotta designs of certain houses at Vicenza (Fig. 338) and the marble decoration of the Venetian palaces. Even in such details of church design as rose-windows, which would seem absolutely to require the use of marble, the artists of Lombardy were able to produce creditable effects in terracotta. This is evident in works like the façade of S.



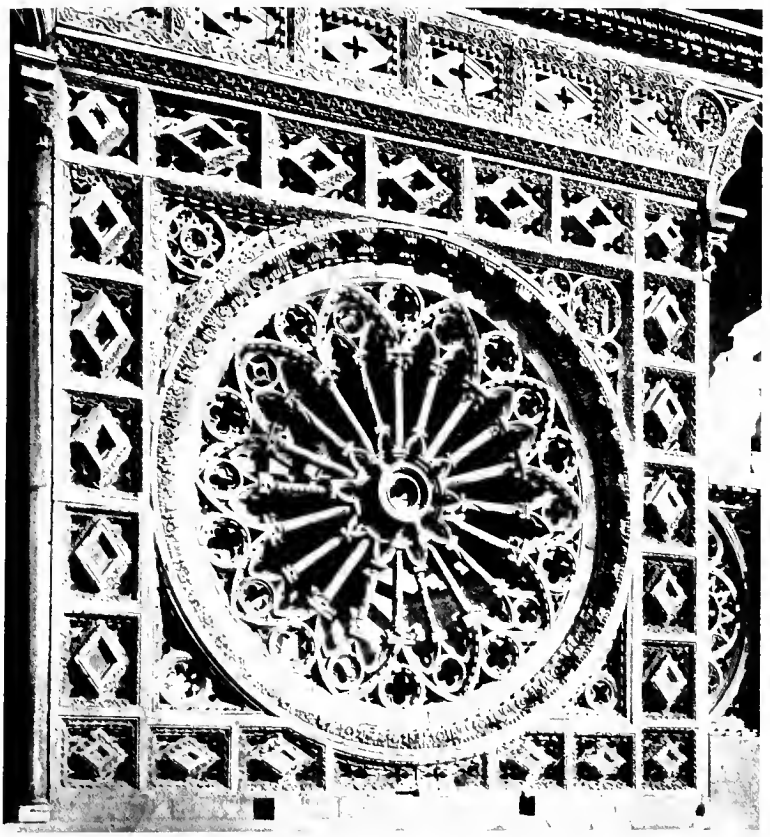
345—Cremona Cathedral: window in minor façade; terracotta detail. (From photo.)

Marco at Milan, a symmetrical design where everything of consequence except the portal is in terracotta and brick.

One of the richest façades of a private house in terracotta is the Palazzo Agostini at Pisa (Fig. 344). It is a late work and rather inorganic in its panelled effects. There is a distinct effort here at differentiating terracotta design from stone and marble. We find this independence often in the terracotta work at Cremona. In Fig. 345 is an elaborate window from the flank of the cathedral, where this is



346—Monza, S. Maria in Strada: central detail of façade in brick and terracotta. (From photo.)

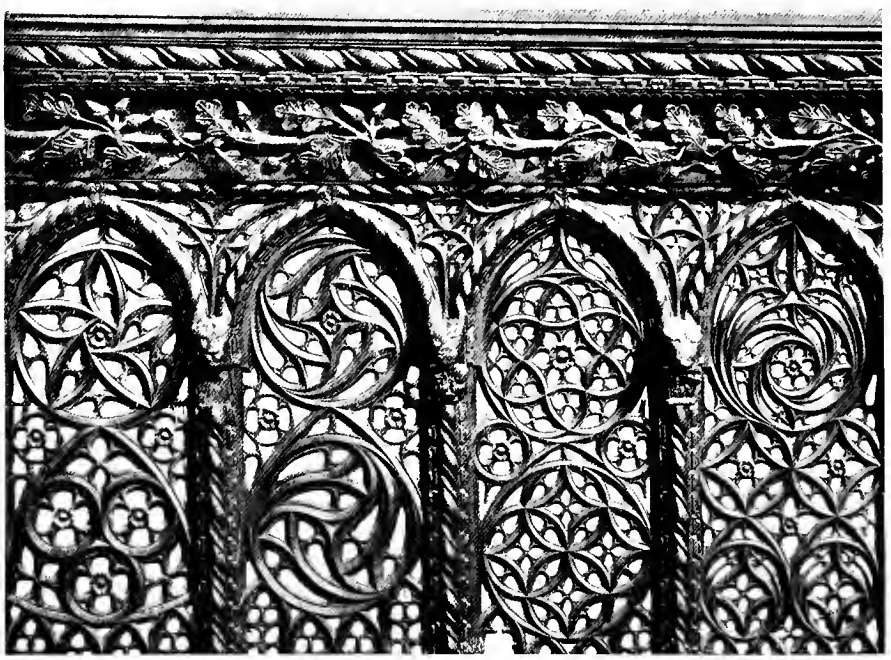


347—Carrara Cathedral: carved marble rose-window. (From photo.)

particularly marked in the panelling of the ground. This led at times to a natural monotony from the repetition of the same mould, as in the archivolts of the Pepoli palace at Bologna.

348—Detail of triforium of St. Francis, Assisi. (From photo.)

For a terracotta composition of unusual richness there is nothing in better taste than the central section of the small façade of S. Maria in Strada at Monza (Fig. 346). Curiously enough, in Monza itself the Cathedral has a façade with an equally rich design on a much larger scale but in marble, which has the unusual division into five instead of three parts. A glance at the Carrara rose in Fig. 347 will give an idea of the richness of the corresponding central section.



349—Carving of Gothic choir-stalls, S. Maria dei Frari, Venice. (From photo.)

Where Italy most closely approximates the best French and Spanish tracery is in Tuscany. The arcades of the Campo Santo at Pisa (Fig. 321) are exquisite. Less familiar is the work in the gallery of the cathedral of Lucca: its position in the church will appear in Fig. 322. Heavier, but splendidly decorative and even less known, is the work on the façade of the cathedral of Carrara; in the gallery

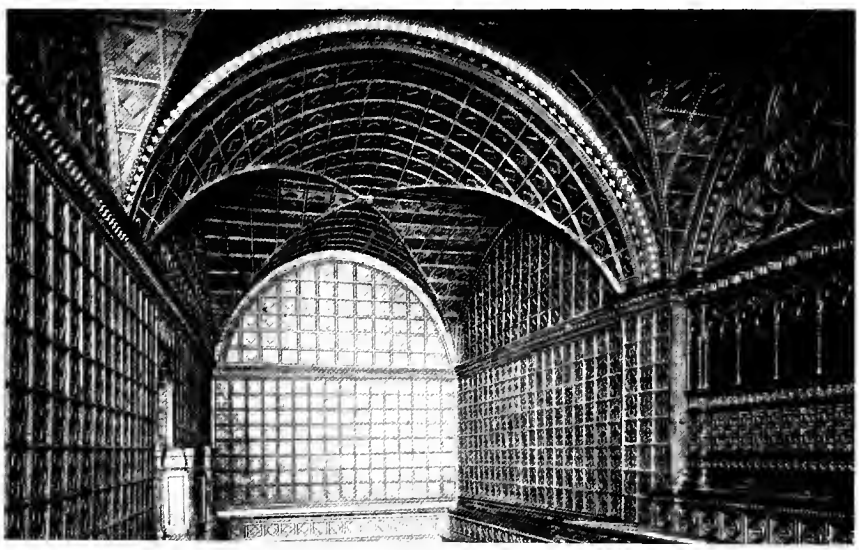
350—Shrine in apse, S. Domenico, Bologna. (From photo.)

under the gable and the rose-window and its panel, illustrated in Fig. 347. The quality of marble was an incentive to such workmanship. The same hand probably executed the charming façade of S. Caterina at Pisa.

One of the peculiar features of Italian decorative design as distinguished from French is that where we should find open tracery in

France we often find surface ornamentation in Italy. A spectacular instance is the series of second story windows at the Or San Michele in Florence. The less known and charming chapel of S. Maria della Rosa at Lucca is of the same time and school. The more usual open type is illustrated by the windows in the Vitelleschi Palace at Corneto (Fig. 342).

The decoration of the interiors of churches is more unsatisfactory in Italy than in any other country for two reasons: lack of stained glass and insignificant clearstories; lack of architectural memberment, particularly of triforiums. The charming detail from S. Francis of Assisi, in Fig. 348, which combines architectural outline with painting,

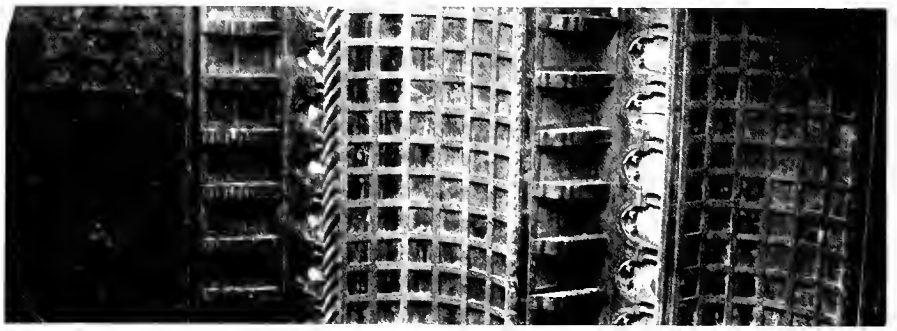


351—Panelling of the Sala della Mercatanzia, Communal Palace, Perugia. (From photo.)

is due to French influence. The un-Gothic expanse of blank wall, now so often whitewashed, was often frescoed. There was a lack of the gorgeous choir screens of Spain and the north: and the main decoration of the choir end was the carved wood stalls like that of the Frari (Fig. 349). Occasionally there is a shrine like the monumental piece of sculpture at S. Domenico in Bologna (Fig. 350), and numerous monumental tombs.

Aside from this sort of choir decoration and the broad field of church furniture, one turns to civil structures. Interior panelling of Gothic design is so rare that the Sala della Mercatanzia in the Munic-

ipal Palace at Perugia is worth special study. It is particularly unusual in following exactly the planes of the Gothic rib-vaulting and the lines of ribs, pilasters and arcades. The most beautiful detail, from the centre of the hall, is given in Fig. 351. In the same building the Sala dei Notari, with its flat ceiling and splendid *arcs-doubleaux*, illustrates the more usual technique of fresco decoration, with its panelled coat



352—Wooden carved and painted wagon roof of S. Fermo Maggiore, Verona, XIII Century. (From photo.)

of arms; it is an extraordinarily effective interior. Both decorations are of the fourteenth and fifteenth centuries.

In connection with this panelling at Perugia it must be noted that there are cases where wood was used not to line vaulting but as a substitute for vaulting. In such plain though colossal pointed tunnel ceilings as the great hall of the Municipal Palazzo della Ragione at Padua, over one hundred feet wide, there is nothing artistic, but there is a distinct style about such a design as the larch-wood wagon roof of S. Fermo at Verona (Fig. 352) of the fourteenth century. This view of it shows part only of one side, and is decorated with painted busts of saints in the arcades.

BOOK XII.—GOTHIC IN NORTHERN EUROPE

CHAPTER I

GOTHIC IN GERMANY

THE word "Germany" is used, for convenience, in its broadest sense, to include not only the provinces of the present German Empire but of Austria, with Bohemia and Hungary. This is not so illogical, after all, because historical records show that both in the matter of the Cistercian invasion and of lay architects, the Austrian provinces were only slightly affected by direct French influence, being largely dependent on the more northern and Rhenish schools. The Rhineland and Saxony were the first to feel the invasion of the new system and it is there that we find interesting rudimentary or partially Gothic buildings. Westphalia and Swabia followed. Austria was even later, with Brandenburg, Prussia and the rest of the extreme north and north-east. Bohemia received more direct French influence than any part of Germany proper except the Rhineland.

Each European country in turn made its contribution to the Gothic patrimony. Germany's addition to the common stock, aside from the traceried spire, was the popularizing of brick and terracotta and the evolution of the Hall-church, which not only became the principal form of interior throughout the length and breadth of Germany from the Baltic to the Tyrolean Alps, but spread thence to Holland and Italy. This development of the air-space in a single nave or with several aisles of equal or almost equal heights was in harmony with the intellectual development of religion in Germany, with the popularity of preaching in religious services, under the auspices especially of the Dominican and Franciscan orders. This made it expedient to bring the whole congregation in closer connection with the pulpit. Such seems, at least, to be the most plausible explanation, for in these matters the explanation is less likely to be æsthetic than practical. It is, of course, true that it was in the Angevin provinces of France

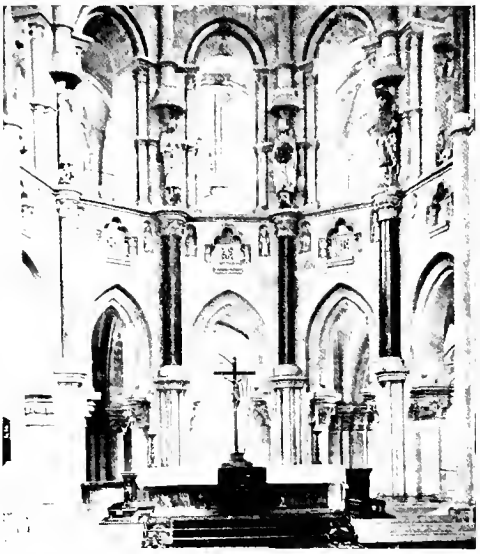
that the hall church type of Gothic construction originated, but it never seriously affected French art, though it spread thence to Spain, especially to Catalonia as well as to Germany. It was, however, only in Germany that it became the prevalent national type. As for the use of brick and terracotta, it cannot be called a legitimate contribution to Gothic patrimony. In Germany as well as elsewhere it was the Stone-cutters' Guild that dominated and directed the development of the orthodox Gothic style. The brickwork branch was parasitic or, at least, inorganic. And, even in this sphere, the North Italian school was æsthetically superior in its treatment of terracotta.

Even if there is, strictly speaking, no such thing as a "transitional" style in Germany, or for that matter anywhere except in Northern and Central France, there is an unusually interesting group of German buildings that illustrate the conflict of the old and the new ideas. They were built, it is true, at a time when the new art had already found itself in France; but for Germany itself the question had to be re-stated with a phrasing partly its own. Of these early efforts we will examine the cathedrals of Magdeburg and Limburg and St. Gereon at Cologne.

Origins.—How did Gothic come to Germany? It has been observed by Dehio that to German architects travelling in France even during the first decades of the thirteenth century the vast majority of the buildings they saw were Romanesque, and that as yet hardly a single building in the new style had neared completion; the majority, like St. Germer and St. Denis, seeming in their outward form to be mainly a variant of Romanesque. Not being themselves in the thick of the movement, and the movement itself not being self-conscious and definite with a formula that could be stated, but tentative and progressive, builders in other countries could hardly be expected to fully grasp its meaning and bearing until an array of developed masterpieces had been produced; that is, not until about 1225–1240. Meanwhile it seems clear that many German artists had gone to France and been thoroughly trained in every detail of the new art, including mouldings, tracery and decorative sculpture, and that it was to the united work of groups of such French-trained men that buildings like the churches of Trier, Marburg and Cologne were due.

The first German architect of an important work where we can watch the embodiment of the new ideas is the author of the choir of Magdeburg cathedral. The entire cathedral is commonly reckoned as

the earliest proto-Gothic German structure, but the second architect, who built the nave, reverted somewhat to Romanesque features, as in the widely spaced piers, so that the choir is the better illustration. In Fig. 353 is a view of the centre of this choir and in Fig. 354 the interior of the gallery, where the structural system can be studied. Evidently German-taught and French-taught workmen worked side by side, the French models showing plainly in the majority of the capitals. The arrangement of granite shafts and statues is thoroughly Germanic, so is the lack of mouldings in the arches, though this peculiarity, as



353—Choir of cathedral, Magdeburg. (From photo.)

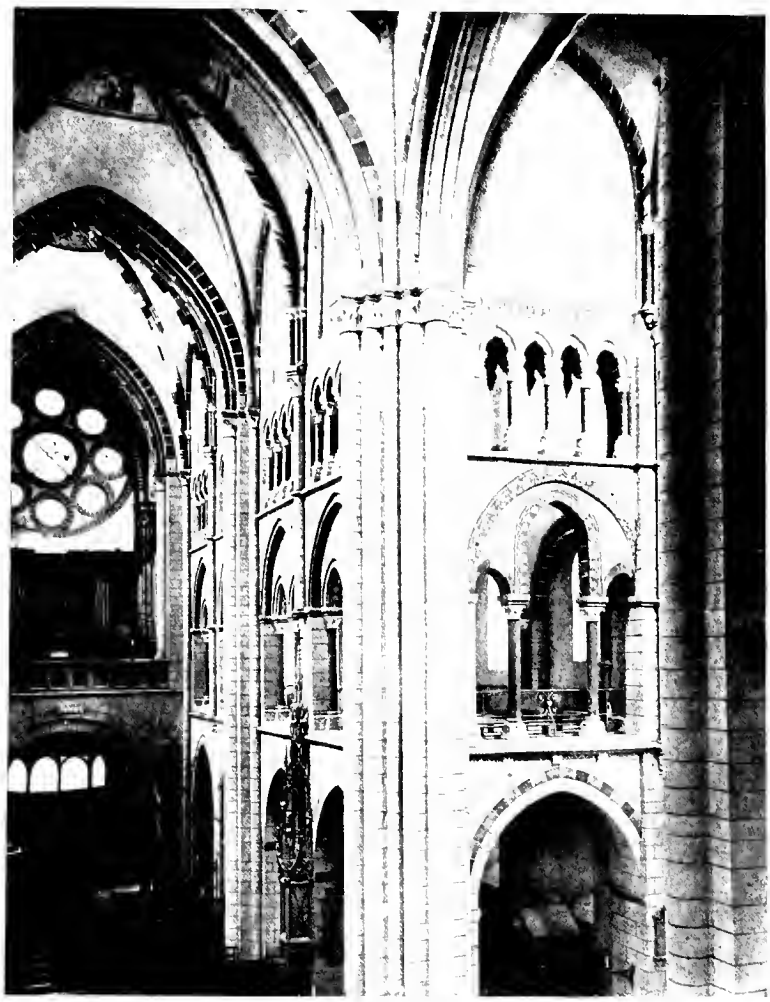
354—Upper gallery in choir of cathedral, Magdeburg. (From photo.)

well as that of the shaft rings, is Cistercian. The gallery is very close to French work of c. 1150–1170. It is supposed that the French building which especially influenced the German architect was the cathedral of Laon. The plan of the choir, at any rate, is entirely French and Gothic, with a deambulatory and five radiating chapels of polygonal outline. As this choir was founded in 1209 (completed c. 1234) and as the choir of Reims, with perhaps the earliest polygonal chapels, was founded in 1212, it is evident that the Magdeburg architect (who changed from the circular to the polygonal scheme in the course of construction, exactly as the Reims architect did) must have been cognisant of the latest French developments. Yet he did not use flying buttresses but relied upon heavy walling. Otherwise the exterior of the apse is even more thoroughly French than the gallery. The same group of craftsmen may have worked on the façade of the cathedral of Halberstadt, also in Saxony, which will be described later, and which also shows the influence of Laon.

In the cathedral of Limburg-on-the-Lahn, begun shortly before 1220 (consecr. in 1235), the entire scheme seems based on Laon, according to some critics, on Noyon, according to others. It has already been mentioned in Vol. II., p. 402, because its imposing exterior has as yet hardly a trace of Gothic (see Fig. 345 on p. 396). But the plan which is there given (p. 396) will supplement Fig. 355 in showing how the interior is an almost exact reproduction of the French transitional scheme, except that the sparing use of the flying buttress necessitated heavier masonry. This view, looking from transept to west end, shows sexpartite vaulting, with alternation of light and heavy piers; high gallery over the aisles with double arcades in the nave, triple in the transept and choir; triforium below the clearstory. The modern colored barber-pole decoration is a mortifying commentary on German taste. The only material deviation from the French model is that the intermediate pier is square, not round, of the plain type so common in German Romanesque. The stilting of the wall ribs and intermediate vaulting shafts gives a genuine Gothic twist to the vaulting, but its extremely domical shape is more Angevin than Frankish. The rose-window in the façade, with its eight oculi, is French (see especially Chartres) in scheme, but how characteristically German in treatment—as, in fact, is true of the entire structure!

St. Gereon of Cologne is another church already mentioned in

Vol. II. (p. 407), and its curious nave, in which the Gothic work appears, is in the form of an oblong decagon, begun c. 1220 and completed in 1227. It is of quite different character from the work at Magdeburg and Limburg, with features copied from some more ad-



355—Transept of cathedral, Limburg-on-the-Lahn. (From Hartel.)

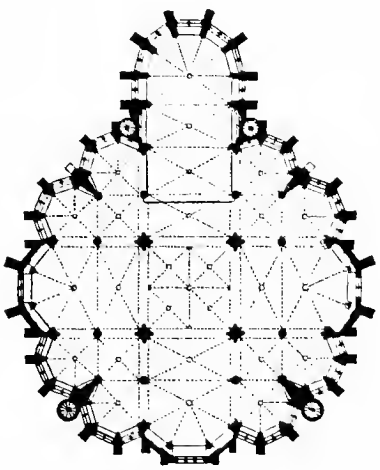
vanced French model, which, according to Dehio, is the Cathedral of Soissons. The clearstory of two- and three-light windows uses the plate tracery. The vaulting cells are similar in construction to some early French apsidal cells: in fact it has been suggested that the scheme of this strange interior resembles two apses set face to face.

There is an interesting breadth and boldness in the composition, and decided originality in the treatment of the niches and of the sub-clearstory. Scattered and less important instances occur, but as they are sporadic and not interrelated and do not show any special German school as adopting the new ideas, we can pass without further delay to pure Gothic work.

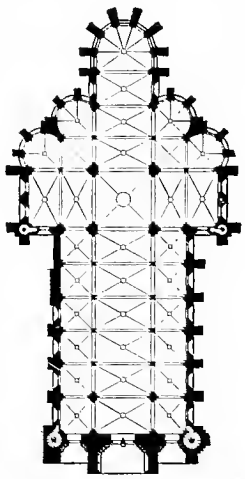
Just as there was no real "Transitional" style in Germany, neither was there an "Early Gothic" style. In the same way as what stands for transitional work is merely the inorganic mixture of imported and native elements, so the earliest examples of unmixed Gothic came when early Gothic had given place to developed Gothic in France. Notre Dame, Chartres, Bourges, Amiens, Reims, Beauvais and even St. Denis nave and St. Urbain at Troyes were built or in course of construction when Strassburg, Cologne, Freiburg and Regensburg were being built and it was from these perfected works that the Germans drew their inspiration. The process of assimilation which these and contemporary German buildings, such as Halberstadt (except the façade), Marburg, Trier, Marienstatt and Altenberg represent, lasted until the beginning of the fourteenth century. Then, between c. 1320 and 1360, after all residuum of Romanesque had been sloughed off, there grew up a German Gothic tradition, which declined to preserve many of the French features of plan, elevation, decoration and structure, which had been copied in the churches built heretofore, such as the choir with its crown of radiating chapels and the triforium.

It is in the upper Rhenish province, at Trier (Treves), that we find the earliest direct importation from France. The church of the Virgin at Trier was begun in 1227 and embodies the latest French novelty; the suppression of the triforium. The plan is concentric and original; we know of no French prototype (Fig. 356), though it is generally supposed to be merely the result of doubling the choir of St. Yved of Braisne (Fig. 357), face to face, making the entrance in the polygonal chapel opposite the Lady-chapel or apse. The square tower over the intersection with its lantern, corresponds to the central dome in a Greek cross design, and this effect is accentuated by the four enormous piers that support it and by the equal width of nave and transept—if we may be allowed to call them such. In fact, as in so many Byzantine plans, what would appear on the surface to be concentric is in elevation a cross. The church is rather a large chapel attached to the big cathedral, as has been described in Vol. II., pp. 408–410. The view given

in Fig. 358 looks toward the choir, and shows the variety of supports that are used; the central column with four engaged shafts, as in Amiens and Reims, the plain column of unusual slenderness, and the elaborately grouped and moulded pier. The windows are of the developed Reims-Amiens type. There is a singular spirited felicity in every proportion and every detail. Imagine from the plan the effect of the other three polygons with their re-entrant angles and their continuous deambulatory and you will have a composition both picturesque and stately. The slenderness of the piers and the height of the lower



356—Plan of Liebfrauenkirche, Trier. (From Dohme.)



357—Plan of St. Yved, Braisne. (From Michel.)

story are more extreme than in the Ile-de-France. The plain walling immediately above, where we should expect a continuation of the clearstory in the apse, is a defect required by the roofing slant.

The charming church of St. Elizabeth at Marburg has already been referred to as the earliest example of an interior of the three naved Hall-type outside France. It is, in a way, an epoch-making church and in itself, also, it has a great deal of quiet simple beauty. Begun in 1235 and consecrated in 1283,[1] it is an unusually homogeneous and pure German version of French forms as well as French structure. This can hardly be said, to be sure, of the plan, for that is merely a modification of the Romanesque trilobate scheme so common

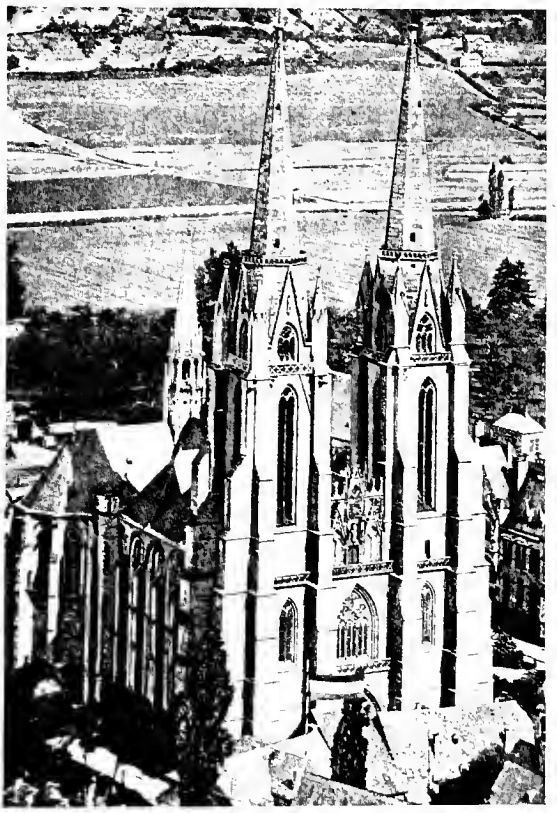
[1] The vaulting at the west end and the spires were not completed till c. 1350, long after the Freiburg spire had given a model for open stonework.

at Cologne (see Vol. II., Fig. 40), with no lengthening of the choir and no deambulatory or radiating chapels: merely a single polygonal apsidal and transeptal ending. It is in fact a plain basilica. This severity of plan has its counterpart in the simplicity of exterior

358—Liebfrauenkirche, Trier. (From photo.)

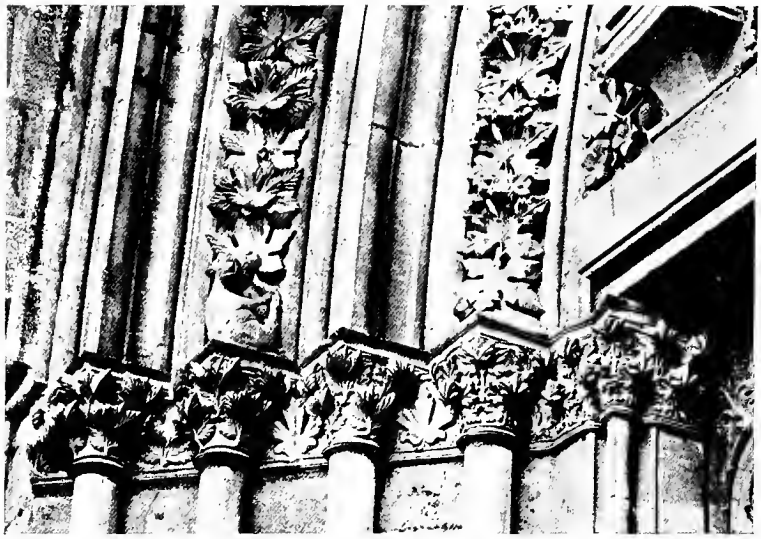
(Fig. 359). The use of a central pointed instead of a rose-window shows that the architect was more influenced by late twelfth century French design than by the more recent developments, though he adopted the style of tracery in current use, which became quite rich on the latter part of the work, on the west front. The twin towers

follow French models and their solid spires are interesting to compare with the later German spires of such unrivalled delicacy. One feels the lack of sculptured decoration, so integral a part of the French façades of this age. It emphasizes the fact that only at the time when this church was practically completed, were German sculptors beginning to follow French sculptural models. The Bamberg cathedral sculptures of c. 1280 are now recognized as having been executed by a German artist who had studied at Reims cathedral and copied



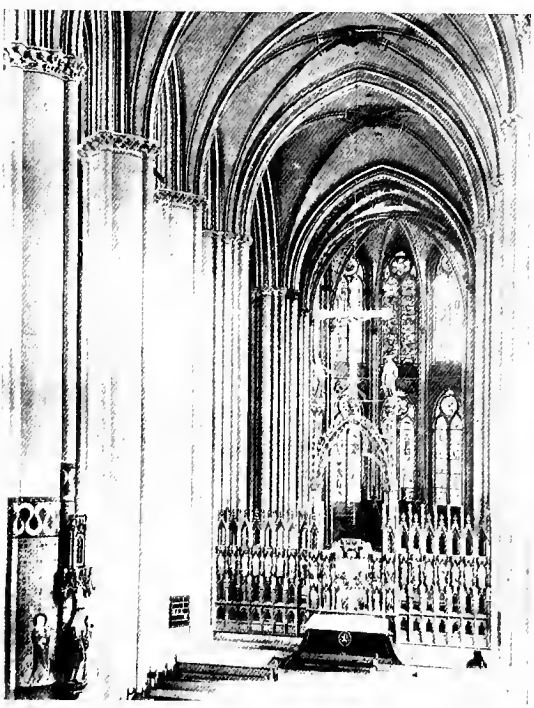
359—St. Elizabeth, Marburg. (From Joseph.)

his models quite closely. From this beginning came the inspiration that spread through Germany. The Marburg church came too early to feel it. On the other hand the handling of the decorative sculpture in capitals, archivolts, friezes and tympana is extraordinarily good, and patterned on the best French work from which it differs mainly in the accentuation of line instead of the delicate



360—Detail of main portal of St. Elizabeth, Marburg. (From photo.)

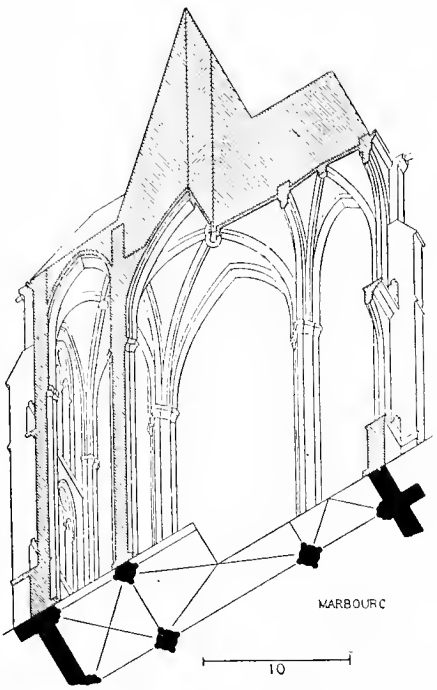
graduating of surfaces that is the French characteristic. This is evident in Fig. 360, taken from one of the portals.



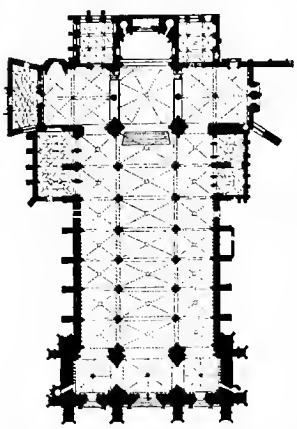
361—St. Elizabeth, Marburg. (From Joseph.)

There are two other points to notice: the absence of flying buttresses, made unnecessary by the equal height of the aisles, and the roofing of each aisle-bay with independent roofs at right-angles to that of the nave. This was done in order to avoid the ugly effect of a single high-pitch roof covering all three aisles—an unæsthetic form which, however, became the common German type during the later Gothic period (see Fig. 361). The view of the interior, stately and simple without heaviness, shows the adaptation of

the Ile-de-France system of vaulting with crowns hardly rising above the transverse arches, and not of the Plantagenet domical system, which might have been expected, as the hall-type was unknown to the Ile-de-France. The piers are of the Reims rather than the Amiens type, quite heavy and with continuous but narrow capitals. It is interesting to note that, although the hall design has, of course, eliminated triforium gallery and nave clearstory, making the structure logically one of a single story, the fiction of a two-story structure is created by the double line of windows in both nave and choir, as we have already seen in the apse at Trier. This is well illustrated in the section in Fig. 362, taken from Choisy. If one were to criticise further, it seems as if a truer feeling of Gothic verticality would have been given by adopting the St. Denis type of pier, with its vaulting shafts starting from the floor line, especially because in the hall-type the mere lengthening of the Reims pier sets the springing of the vaulting ribs at too high a level for symmetry. In order to realize the changes introduced in the course of time throughout Germany, in the process of nationalizing this type of hall church, reference should be made to Figs. 394, 397 and 399. It seems curious that its later adoption and development should proceed not from the Rhenish province but from Austria, whence it worked back northward, and also from the farthest north to which it came from southwest France. Among the exceptions to this is a group of early churches in the province of Hesse, which follow the Marburg type very literally, for instance the

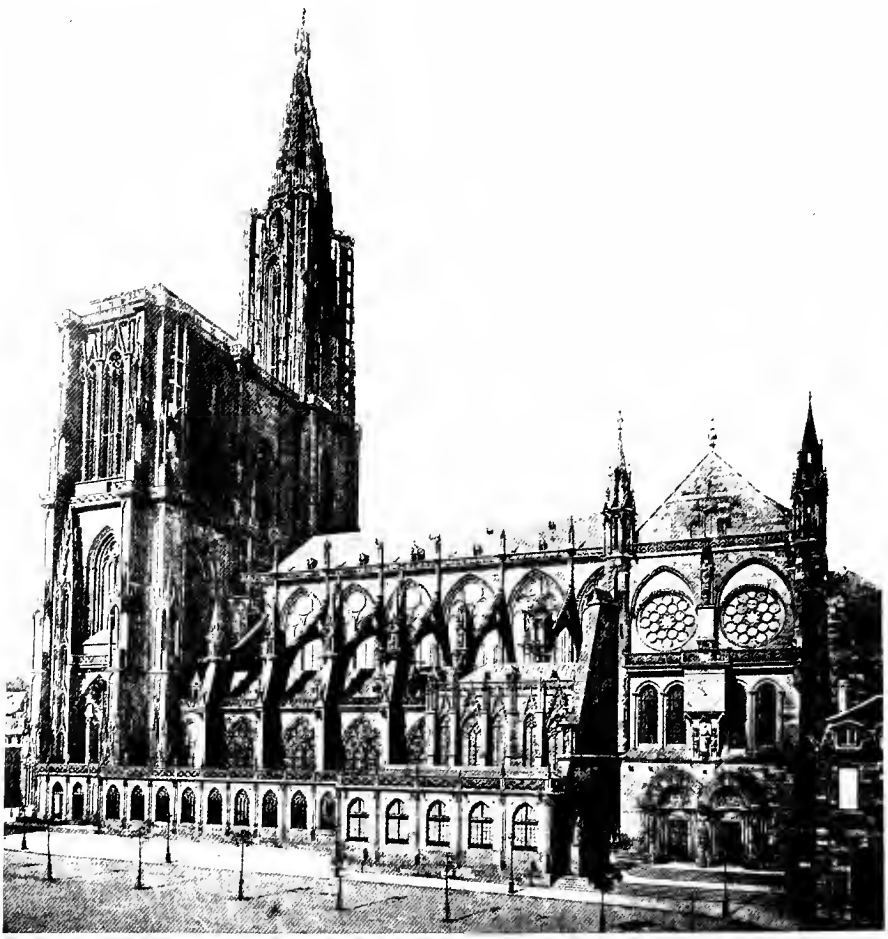


362—System of St. Elizabeth, Marburg. (From Choisy.)



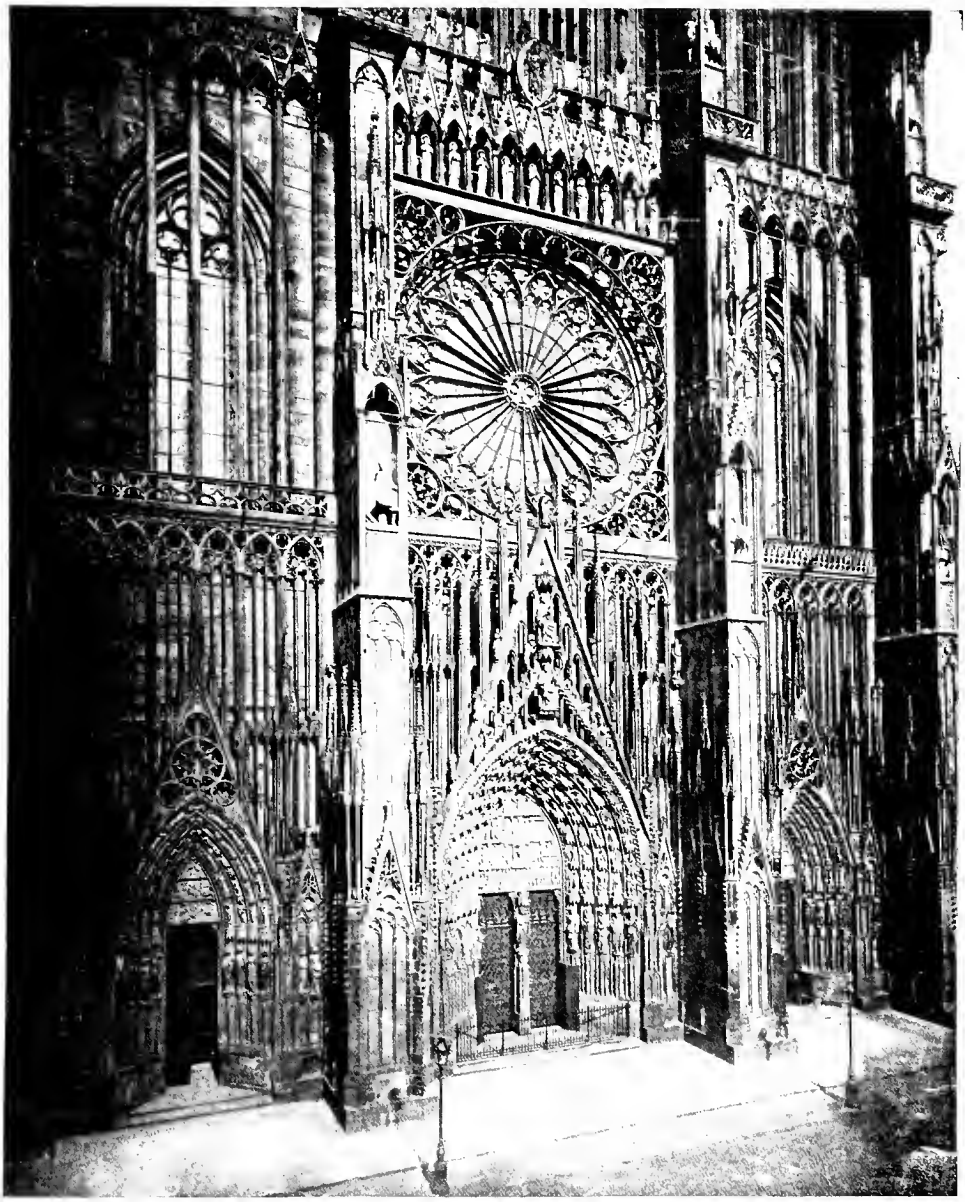
363—Cathedral of Strassburg. (From Dohme.)

Cistercian church at Haina; and a second group in Westphalia, the early home of the hall-type in Romanesque times, where the cathedral of Minden, with three naves of almost equal height, is a fine instance of local thirteenth century development.



364—Strassburg Cathedral from southeast. (From photo.)

The Rhine and Saxony; National Evolution.—The middle of the thirteenth century is reached, then, without our discovering the construction in Germany of a single church of the normal cathedral type on Gothic principles. Even then, in the two glorious masterpieces at Strassburg and Cologne, this type was only partially carried out, at Strassburg in the nave and at Cologne in the choir.



365—West front of Cathedral, Strassburg. (From photo.)

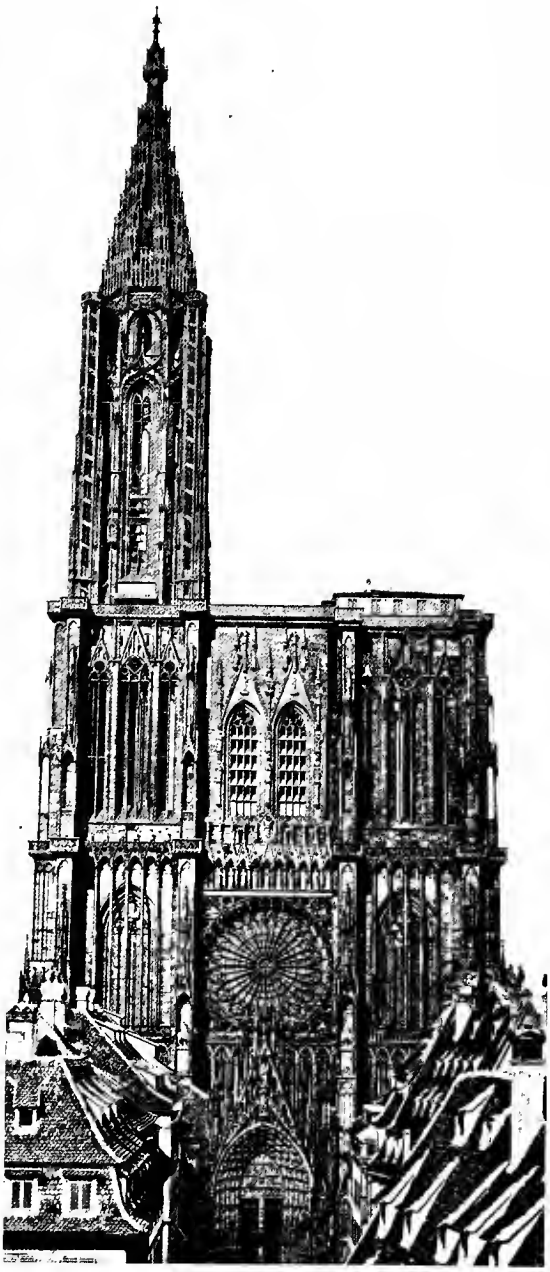
At Strassburg the plan in Fig. 363 shows a plain Romanesque apse, and a transitional transept (Fig. 364). We can study in the transept, better than in any other building in Germany, different stages in the acceptance of transitional forms. Strassburg, when its

reconstruction first began, stood for certain local Alsatian characteristics, such as we see in the churches of SS. Peter and Paul at Neuweiler and St. Arbogast at Rufach, where there is a distinct type of transition. What the cathedral would have been if built on these lines is shown by Plate III. The walling and piers are heavier than

366—Interior of Strassburg Cathedral, from aisle. (From photo.)

the heaviest French transition (c. 1180–1200). The vaulting in the right arm of the transept is later and loftier than in the rest and belongs to a second transitional stage, later than 1200. The splendid boldness and originality of the designer is particularly shown in the so-called "Angel" pier which supports the four vaults.

The view of the exterior from the southeast in Fig. 364 shows the exterior of this end of the transept with its round-arched doors and windows and the curious imitation of early French rose-windows above. Then, the nave was planned c. 1250 and completed c. 1275 in a style equalling the best French work. In the general view of the exterior in Fig. 364, the effect is somewhat dwarfed by the façade, but in Fig. 365 the richness of the detail in the buttress-piers and the structural system stand side by side with similar work at Reims and Amiens.



367—Strassburg Cathedral: façade. (From photo.)

If we set the view of the interior of Strassburg (Fig. 366) by the side of one of St. Denis (Fig. 117), which had only just been built, it becomes perfectly plain whence the German architect borrowed his nave system. The only important difference is in the lower proportions; and for this the German architect is not to blame, as a glance at Fig. 364 will show that the height of the vaulting was predetermined by the already existing transept. At the same time greater apparent height as well as lightness would have been

368—Virgins of west portal, Strassburg Cathedral. (From photo.)

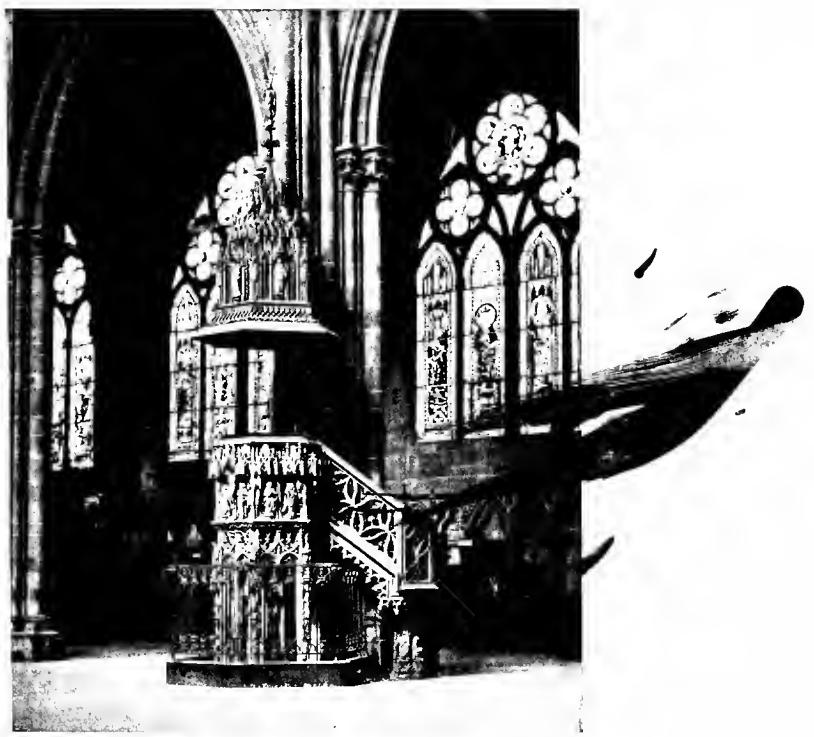
achieved had the spring of the main vaults been set higher, as at St. Denis, with less pointed and heavy transverse arches and less shifting of the longitudinal ribs.[1] Yet, it would be hard to find a more satisfying effect than in this interior, even if it lacks the soaring qualities we shall find at Cologne. Its design is attributed to the famous architect Erwin of Steinbach, but it was probably begun before he took charge.[2]

The Strassburg façade is the most notable in Germany and is a work of extraordinary interest and undeniable beauty. It is perhaps the most beautiful of all Gothic façades. We know so much of its history that it is an object lesson in the matter of the changing ideals between the thirteenth and fifteenth centuries in the Rhenish province. A glance at Fig. 367 shows what an enormous self-sufficient structure it is, even without its second tower. It also makes plain the fact,

[1] The vaulting of the nave was renewed in 1454–1469.

[2] The sculpture of the portals ascribed to Erwin's time is executed with marvellous fineness, surpassing the more epic work at Bamberg. The Virgins, of which two are given in Fig. 368, are perhaps the most noted of individual Gothic statues. As a piece of later Gothic sculpture of unusual decorative value, the pulpit is given in Fig. 369, which is perhaps the most interesting of its class. Here also the details of the window tracery can be studied.

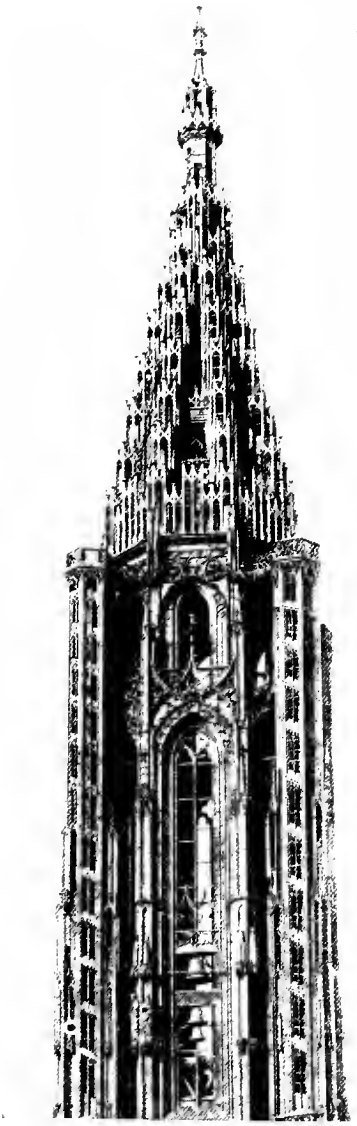
proved in any case by an early drawing, that the entire solid third story extending from the roof ridge to the base of the towers, was an addition to the original design made to suit the new ideas of the late fourteenth century. In the original scheme, which is given in an early drawing, still existing, the solid part of the façade was a square, as at Notre Dame, on which rose the octagonal story that was to carry the spire. These two lower stories were finished in about 1298



369—Cathedral, Strassburg: view of aisle from nave, with pulpit. (From photo.)

under the architect Erwin of Steinbach, to whom the original design of the façade is attributed. It was after 1350 that the third story as it stands was planned, in harmony with the current tendency to over-elongation. The scheme was that of Ulrich of Ensingen (1399–1419), except that a further elongation was carried out by his successor. Hültz, who interposed a short additional story directly under the spire! The spire itself, with its buttress-like corner staircases and its broken lines of superimposed stones of tiny interpenetrating open octagonal tabernacles, forming a sort of jagged pyramid, is the greatest

existing tour-de-force in stone lace work, worked out with apparent irresponsibility but with the most real geometrical science, as the details in Figs. 370, 371, indicate. In design both tower and spire remain unique. At a time given to over-elaboration the lines were kept clean and sharp, with only a minimum of flamboyant tracery, for example, at and below the base of the spire. It is true that the original design was more elaborate as well as more artistic, that it was modified for economy, especially in disconnecting the vertical terminations, and that the actual workmanship of the masonry is rather crude if examined closely. Still this remains the most beautiful tower in the most beautiful façade.



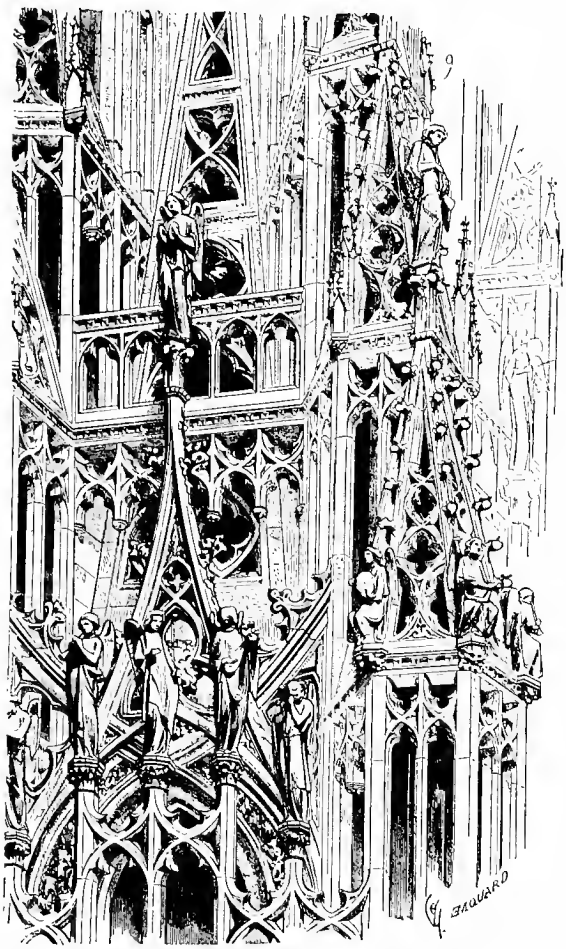
370—Spire of cathedral, Strassburg. (From photo.)

The means by which the unusual effect is obtained is the system of free-standing decorative stonework which masks the solid façade at a distance of about 14 inches. This etherial network of delicate and elongated lines casting sharp shadows is even set across the large second story windows, and its technique is well shown in Fig. 365. Though it is doubtful whether this scheme originated as early as Erwin of Steinbach it appears in an early drawing for the façade, and can hardly be later than 1315–1330, though the openwork gable over the main door seems of later design and the tracery in the corners around the rose-window and in the upper gallery can hardly be earlier than c. 1400, on account of their flamboyant lines.

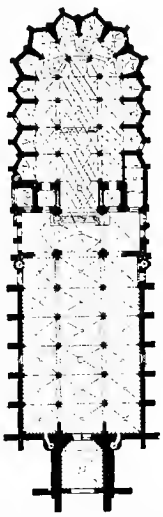
The activity of the Strassburg chantier between c. 1180 and 1450

gave it supremacy among the German masonic lodges when these were organized. Its influence was at once illustrated at Freiburg.

The next early masterpiece of the Rhenish school, the cathedral of Freiburg, is also a *pot-pourri* of different periods. The plan, Fig. 372, shows how when construction began, at the choir end, early in the thirteenth century, Romanesque was still dominant, with transitional elements, as at Strassburg (Fig. 363). To this stage belong the towers flanking the apse and the arms of the transept, which has ribbed vaults and pointed arches (c. 1230–1250). A new architect, trained in French Gothic, must then have been put in charge of building the nave. He put up the two bays next to the transept, between 1250 and 1270. But, while contemporary with the Strassburg nave, it is far from following French models as closely. The German tendency to reduce elevations, simplify or diminish units and decoration receives numerous concessions, especially when a second architect had

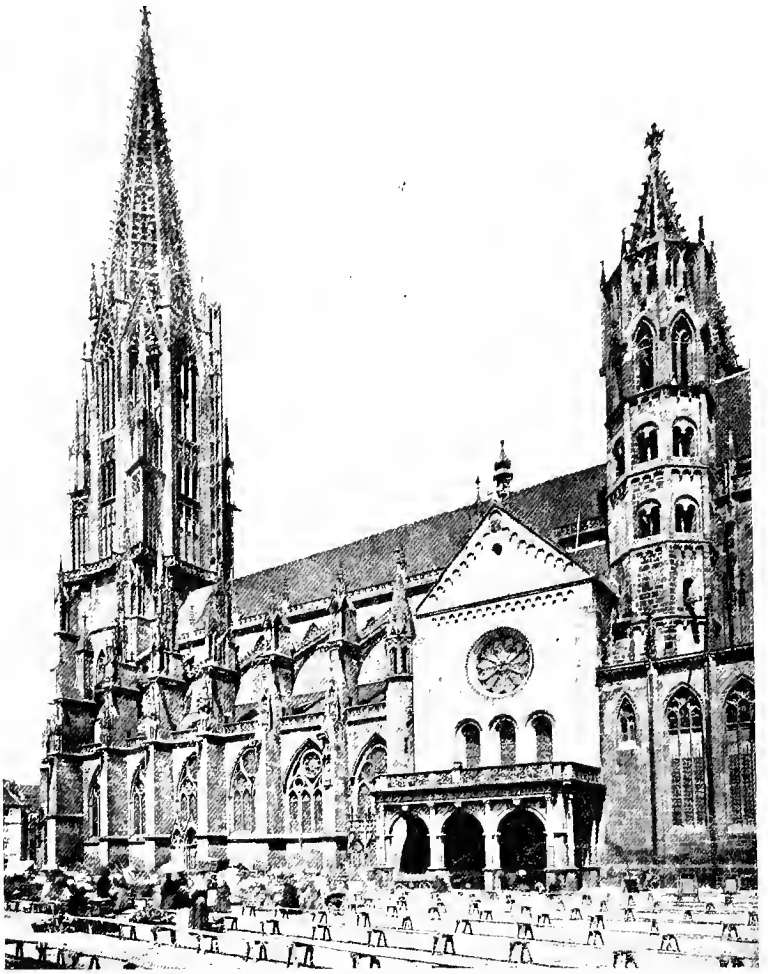


371—Detail of spire, Strassburg cathedral. (From Viollet-le-Duc.)



372—Cathedral of Freiburg in Breisgau. (From Dohme.)

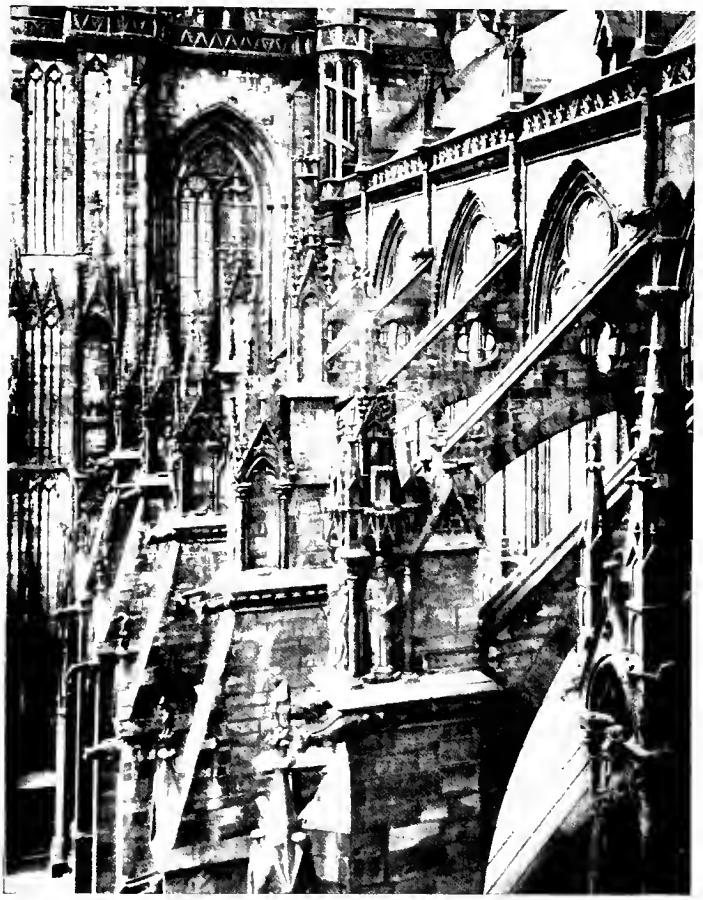
superseded the first and had given up the triforium. As at Strassburg the piers are grouped and the vaulting shafts start from the pavement: the arcades are low and wide. The effect is marred by the absence of triforium without a lengthening of clearstory, which leaves a broad



373—View of Freiburg cathedral from southeast. (From photo.)

flat wall space. This would not have occurred in France, England or Spain, but appears not to have been disliked in Germany, as it reappears soon after in St. Lawrence at Nuremberg in somewhat more extreme form, and even at Ulm cathedral. The clearstory windows, also, are small: such as had not been used in France since before 1200. The proportions of the aisle-windows are too squat for beauty (Fig.

373). If one examines, now, the nave west of the first two bays, the general design of the four remaining bays is seen to differ little, but the tracery changes considerably and the upper clearstory has three instead of two lights—a change which we found to have taken place in France between Reims and Amiens (Fig. 374). The reason is that there was a long intermission at this point. Work was stopped on the nave and commenced at the west façade, on the beautiful tower which



374—System of buttresses of cathedral, Freiburg. (From Hartel.)

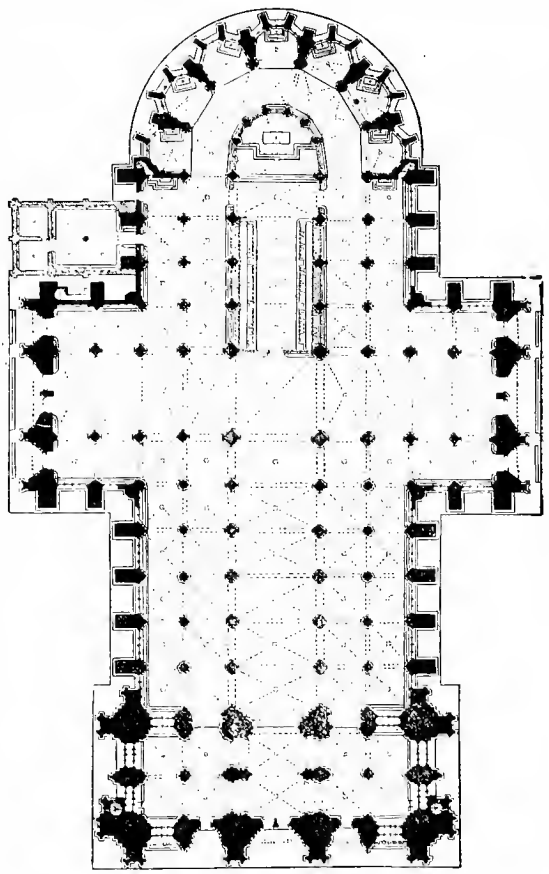
is one of the glories of Germany. It was begun 1268–1270 and it not only furnished a model for future one-towered façades but for the towers of open stone-work that were to exercise the ingenuity of the German stone cutters and designers of the fourteenth to fifteenth centuries. As it was completed in 1288 it is the earliest of these German masterpieces and shows what the twin towers of Strassburg and Cologne

would have been had they been carried out as planned at this time, because the drawing for them which is still preserved shows that the Freiburg and Strassburg towers were drawn in the same workshop if not by the same hand. The entire west front serves as base for the tower in five receding stories, unbroken except for one splendid portal and a purposely small central window. There may be French forerunners for its general design, but there appear to have been none for its openwork spire and the large windows of its octagon.

Differing from Strassburg, whose primitive apse remains, the Freiburg structure, some time after the completion of its tower, received a new choir, equal in size to the main body. It was begun after 1359, on the plans of John of Gmünd, of the same school as the Peter Parler who worked at Prague. It has both an ambulatory and radiating chapels and as at Prague these chapels are continued in the choir nave in place of outer aisles, but the chapels have only two instead of three faces, according to the common Germanic process of simplification. It is difficult to say whether the scheme for this choir came through Prague or directly from France. It received the curious modification of the inner line of piers of the ambulatory imagined by the Gmünd school, to which I will refer later, by which four instead of six piers correspond to the six responds of the chapel walls. This modification of the French apse gives a more open, widely-spaced ambulatory, obviating the use of narrow stilted arches and was in harmony with the German love of space. This Freiburg choir is one of the most extensive in Germany and in itself a wonderfully effective and beautiful interior, but its dimensions dwarf the rest of the building and are out of scale.

It is in the cathedral of Cologne that Germany approaches most completely the norms developed by the leaders of the advanced French School of the thirteenth century. Aside, however, from its plan and general design, which have been carried out as originally planned, the actual handiwork of the thirteenth to fourteenth centuries appears first only in the choir and then on the façade. It was in 1248 that the building of the choir was commenced under the architect Gerard. It is not certain that he was a German. In any case he must have not only been trained in the Ile-de-France or Champagne but have studied the drawings made by its masters for the great buildings then in course of construction, because the Cologne choir shows acquaintance with a development and amalgamation of

the schemes of the two most perfect French choirs of Amiens and Beauvais. Now the Amiens choir was not actually begun until ten years after Cologne (1258) and the Beauvais choir, while commenced in 1247, was not completed until 1272. Evidently, then, Gerard had been given access to the drawings already made for these two choirs, and had adopted elements from each, while preserving considerable originality.

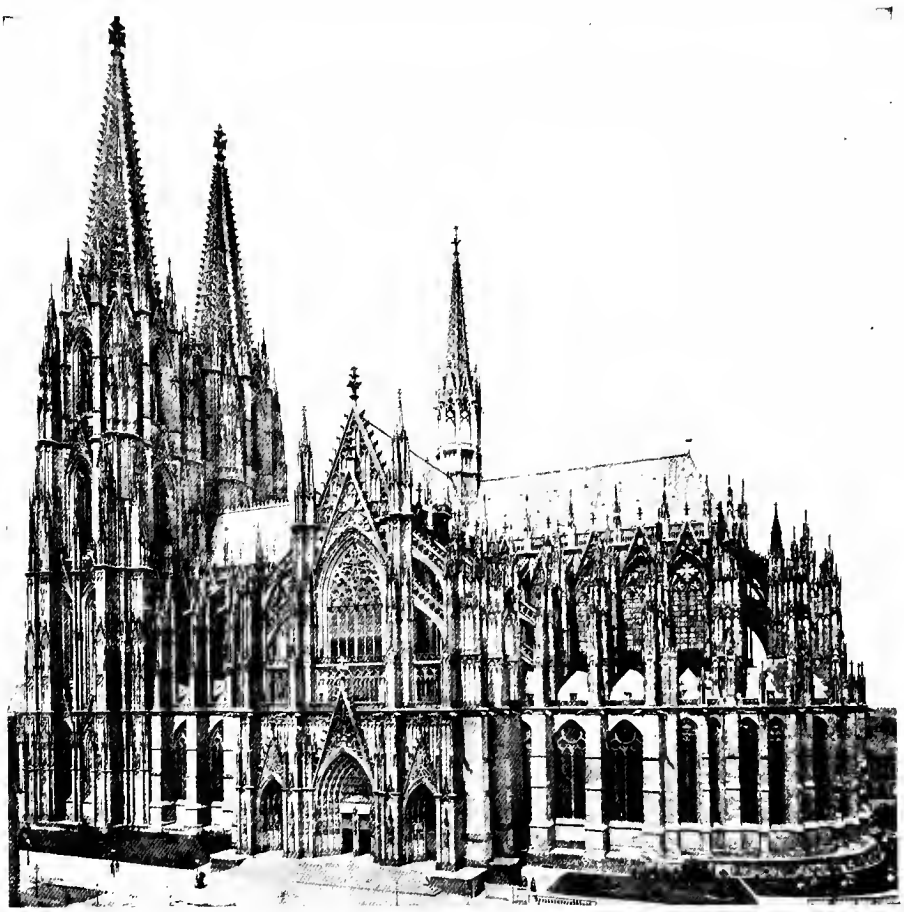


375—Cathedral of Cologne. (From Dohme.)

Cologne had seen the most splendid display of Romanesque architecture of any German city. The cathedral was planned on a very large scale even for that ambitious age. It differed from its French predecessors in having a more projecting transept and five in place of three aisles in the main body. A reference to the plan in Fig. 375 shows that there was a shortening of the nave corresponding to its widening, and that the pair of western towers assumed enormous proportions in plan, as they were each made to cover the width of two aisles instead of one as was the case in France. The architect opened up their base on four instead of with a single vaulting compartment. Whether this was the original scheme or not it had been adopted at the time of the completion of the choir in 1322.

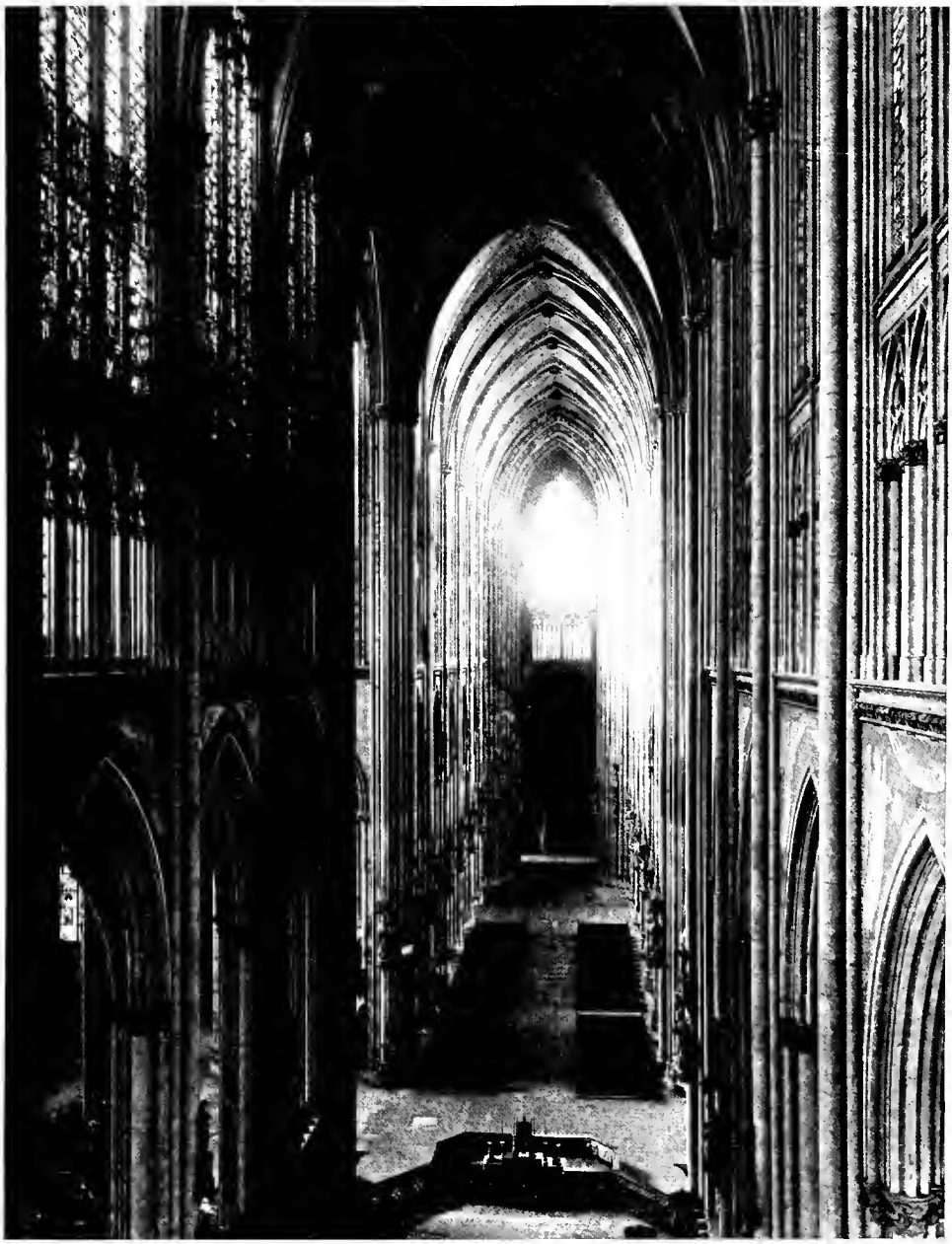
The fairest view of the exterior is that shown in Fig. 376, which gives prominence to the choir and shows the articulation of the towers with the church without permitting them to dwarf it. An old print shows exactly in what condition the work was left at the close of the

Middle Ages, with the crane still standing on the unfinished towers, and the big gap between façade and choir with only a small portion of one side of the nave at the transept built and then walled in as the choir had been to wait for better days. In the majority of such gigantic undertakings the work was carried along during the late Gothic and



376—Cathedral of Cologne, showing choir. (From photo.)

Renaissance periods, but in this case it was not until the nineteenth century that the task of the early Gothic masters was taken up. It was done at a time when archæological study of Gothic was well advanced, so that the style of the original scheme was strictly adhered to; hence Cologne does not show the succession of styles that is so usual, but has a perfect unity which is also a disadvantage because it is the product of archæological and not of artistic feeling.

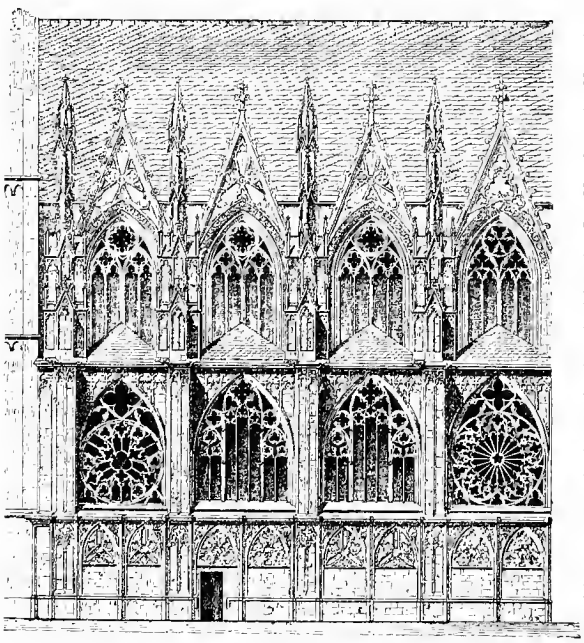


377—Cathedral of Cologne: view from choir. (From photo.)

The view of the interior in Fig. 377 is taken from the end of the choir in order to give as much prominence as possible to the original part of the structure. Comparing it with the view of Amiens in Fig. 64 we notice at once that neither the string-course at the base

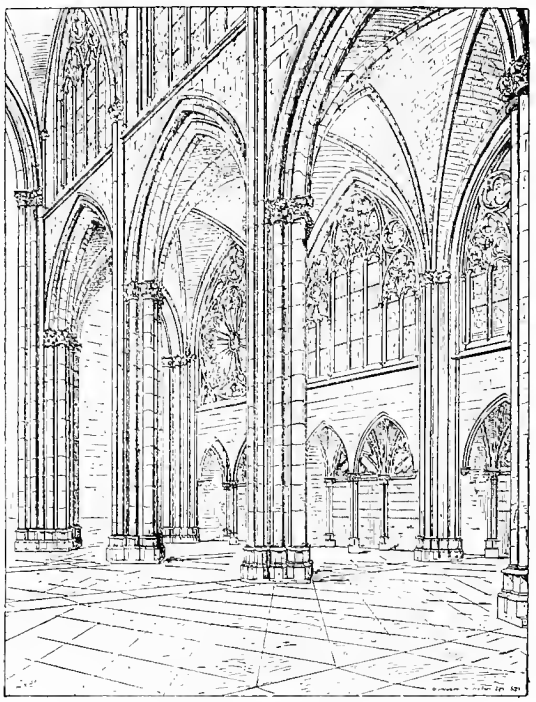
of the clearstory nor the cornice at the base of the triforium are carried across the triple vaulting-shaft, and that the shafts for the diagonal ribbing start from the pavement instead of from the capital of the main arcade; in other words, the system is that of St. Denis, a scheme which adds apparent to real height by strengthening the vertical lines.

The impression of great height is justified by the measurements. At Chartres the width of nave is 46 feet and its height is 106, giving the ratio of 2.3: at Amiens these measurements are 46 and 144, with the ratio of 3.1. But at Cologne the figures are 41 and 155 feet, giving a ratio of 3.8, with a nave five feet narrower and eleven feet higher than its French model. In another particular the Cologne choir goes a step beyond Amiens; that is in the development of tracery and the abolition of remnants of wall space. The triforium is not only glazed and united in design to the clearstory, but the spandrels of the triforium arches are traceried as at St. Denis; the wall space between the crown of the main arcades and the base line of the triforium is decreased, and the spring of the main vaulting-ribs is set as high as possible, to diminish the area of the vaulting cells. In order to secure the glazing of the triforium, the pavilion roof was used over the aisles, as in the Amiens choir (see p. 59). One improvement must be granted in the inner semi-circle of the choir. At Amiens the stilted arcades seem narrow and the piers relatively heavy; at Cologne this effect is diminished by making the piers with a pear-shaped instead of a circular core, a peculiarity borrowed perhaps from the Beauvais scheme, which allowed of an increased span in the arcade. Other characteristics in which Cologne is closer to the St. Denis nave than



378—Detail of exterior of nave, St. Catherine, Oppenheim. (From Adamy.)

to the earlier Reims-Amiens-Beauvais group is in the multiplication of shafts in the piers and the loss of the individuality of its central core; the diminution in the size and importance of the capital. Taking these facts into consideration, together with the continuity of effect given by the five-aisled body of the church as compared with the three-aisled French cathedrals, it is clear that the interior of Cologne, while it is a mere transcript of French forms without the slightest infusion of Germanicisms, gives as a result something slightly different from any that we find in the larger French cathedrals; the culmination in fact of the developed manner, before the rise of the geometric phase. The effect of frigidity, when we analyse it, is due largely to the fact, that the body of the church and the bulk of the towers are modern in execution, even though carried out according to the antique design. One of the interesting points in this connection is the accidental discovery in a shop of the immense ancient project on parchment for the façade, a work of the fourteenth century, and used in the modern work.

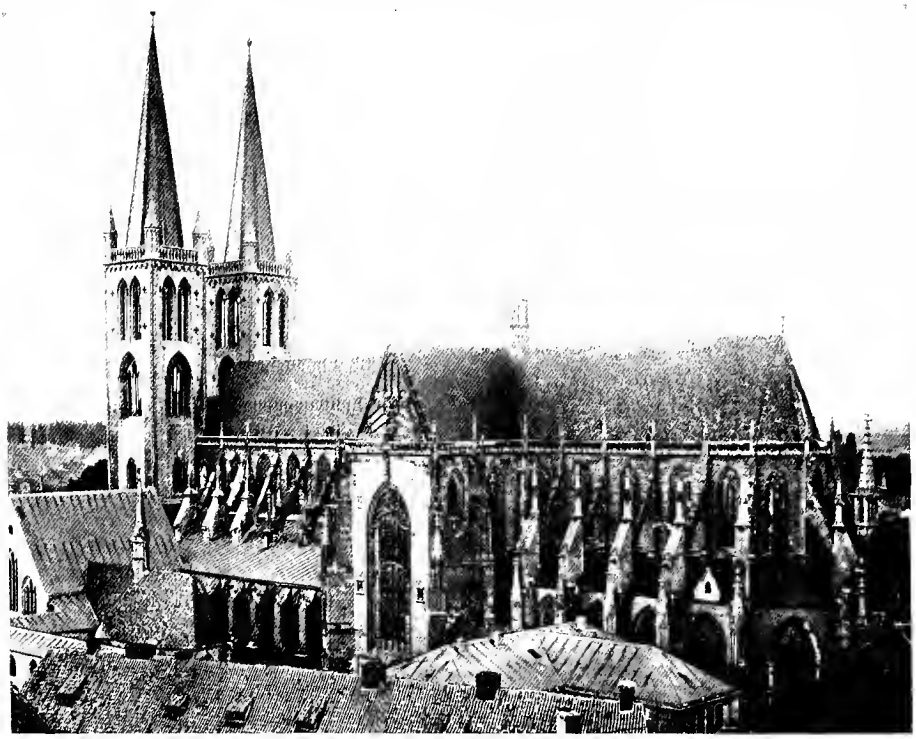


379—Interior of St. Catherine, Oppenheim. (From Dehio.)

The fact that German critics see in the exquisite church of St. Catherine at Oppenheim the hand of the Cologne school, and that its architect did actually come from Cologne, proves what has been said. It is not large, has a plan of the type of St. Yved of Braisne (Fig. 357), and shows the influence of Champagne. Still, it has a special character quite unique both in arrangement and in the type of its lavish ornament. In Fig. 378 are four bays on its south flank. The buttresses are internal, between a line of low chapels which appear in the interior view of Fig. 379 as less in the form of chapels than inter-

rupted outer aisles. The architect has taken directly from France the closing up of the gap between clearstory and arcade and he has used the Norman form of the pavilion roof over the chapels in order to accomplish it. The richness, fantasy and variety of the tracery in windows and gables is unequalled in Germany, I believe, and very unusual for its date, which is about 1300.

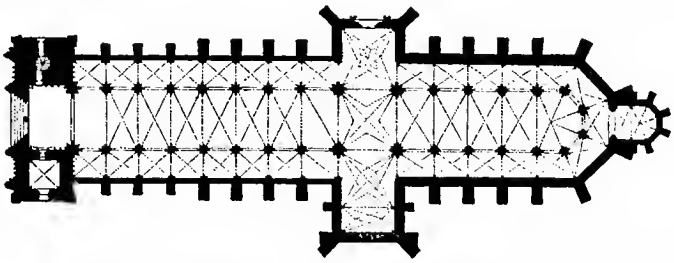
The Cologne style did not become acclimated in Germany. The similarity to it in the contemporary abbey church of Altenburg, in the



380—Cathedral of Halberstadt. (From photo.)

same province, is not as strong as it is generally supposed, considering that its supports are not piers but plain cylindrical shafts, as at Notre Dame. It was a Cistercian building and its prototypes are such Cistercian churches of Northern France as Ourscamp. After 1322 the choir of Cologne was walled off and closed up. Its orthodox French scheme of radiating chapels was not adopted: the tri-apsidal Champagne plan was preferred by later German architects; still they later evolved a polygonal choir with ambulatory but without radiating

chapels which became practically a national type that went even beyond Germany, as, for example, to Milan cathedral. We cannot, to be sure, understand how such a type could be preferred æsthetically, but neither can we understand how the English could prefer their



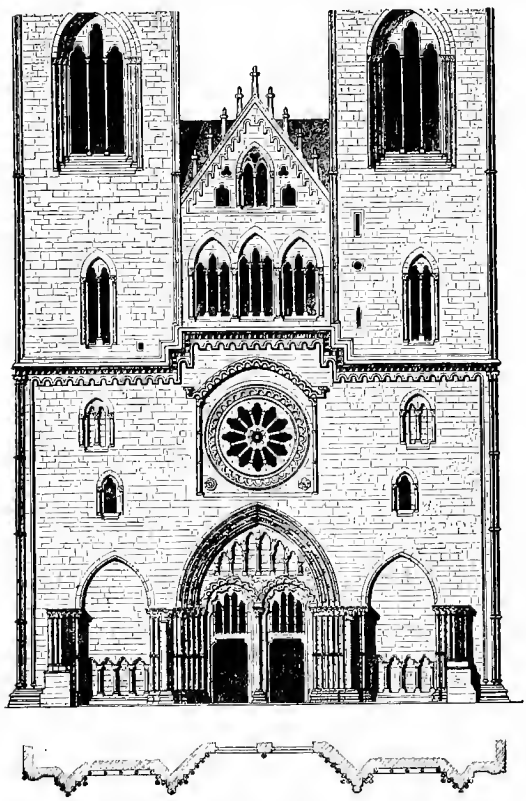
381—Plan of Halberstadt cathedral. (From Dohme.)

plain square apses to the French design. It is merely an idiosyncrasy to be chronicled.

A similar unity to that at Cologne appears, for other reasons, in the cathedral of Halberstadt. It is characteristically Saxon in its simplicity when compared with Rhenish work. The view given in Fig. 380 is almost as good as a ground plan, but the ground plan in Fig. 381 will emphasize its great length. The apse is a pentagon with deambulatory but without radiating chapels except for the low central Lady Chapel. The transept is almost in the centre, the choir nave having four bays beside the apse, to the eight bays of the main body. This long and narrow plan is unusual. The building began, contrary to custom, at the west front. In Fig. 380 the towers show plainly an earlier style than the nave, but it is not so clear at first glance that the body is of different periods, except that the great window in the transept could hardly be earlier than the fourteenth century and presupposes English influence. The view of the nave in Fig. 382

382—Cathedral of Halberstadt. (From photo.)

shows a scheme of piers and vaulting shafts midway between the Amiens and St. Denis naves. Although there is no triforium, the height of the arcades and the length of the clearstory reduce to a minimum the intermediate wall space, so avoiding this disagreeable feature of the Freiburg interior. The main vaults are unusually high in proportion to the width of the nave, having the ratio of 3.02, which is about that of Amiens. The transept is the part that most clearly shows the handiwork of the fifteenth century. The façade with its porch and towers appears to date between 1220 and 1240, and soon after (1240–76) came the first three bays of the nave, which determined the rest, their design being apparently followed. The view of the façade in Fig. 383 helps us to see the connection with both Magdeburg and Laon which the lower part of the structure indicates, with its un-Germanic planning of a projecting triple portal on French models which was never carried out. The choir was not finished until 1402 and then followed a completion or reconstruction of the transept and east end of the nave and, between 1470 and 1486, the construction of the main vaults, which originally seem to have been planned as not quadripartite but sexpartite, following the French fashion that was given up c. 1200—another sign of an early French model of the Laon period. Taken altogether Halberstadt is most instructive even if it is not altogether beautiful.

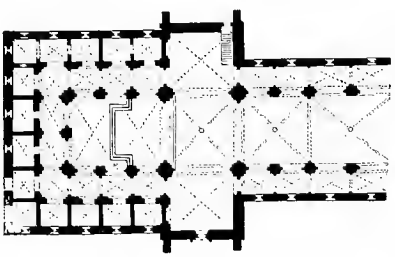


383—Cathedral of Halberstadt. (From Dohme.)

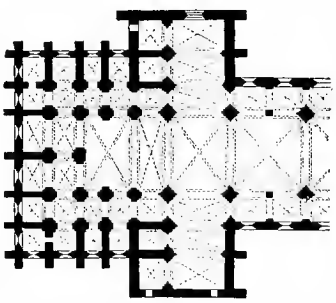
A small church at Wimpfen in Thal on the Neckar is historically interesting because we possess the contemporary chronicle which relates how in 1269 a skillful architect who had just come from Paris

was placed in charge of the reconstruction which was to be in "the French Style," *opere Francigeno*. This is the "classic" passage relating to the recognition by Germany in the new Gothic style as French, and has been a trifle overworked, perhaps. The architect was rather a German educated architecturally in Paris, than a Frenchman. The church itself remains and bears out the statement, though its modest dimensions and simple details recall parish churches rather than cathedrals.

Cistercians.—There is no doubt, however, that French architects had for years been coming to different parts of Germany to build for the Cistercian monks who were founding monasteries from Burgundy. Such was, for instance, the choir of their church at Marienstatt near Hachenburg in Nassau, begun in 1243, which is one of the earliest, if not the earliest choir of thoroughly French plan, with seven radiating chapels. The Marienstatt church is only one of several cases which show that while in Italy and England Cistercian architectural models come from the primitive source of the order, Burgundy,



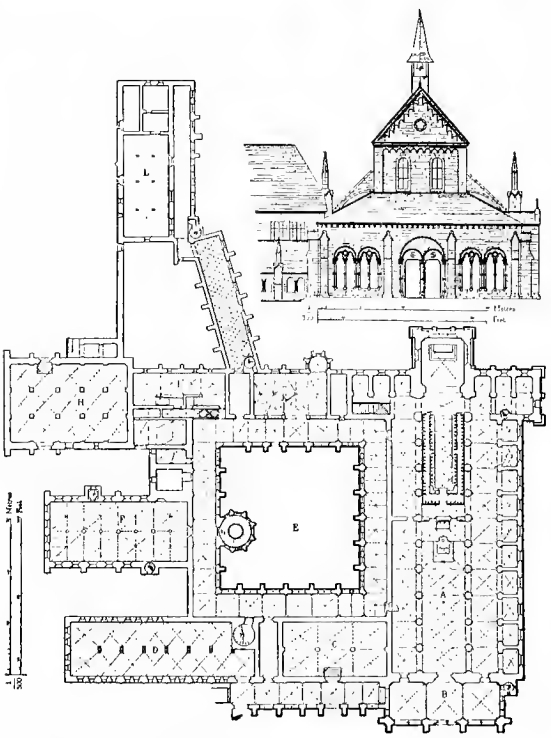
384—Choir of Cistercian church of Riddagshausen. (From Dohme.)



385—Choir of Cistercian church of Ebrach. (From Dohme.)

with its simplified and undecorated forms and its preference for simple apsidal endings, Germany received some Cistercian influx from further north where the order had adopted Ile-de-France forms. An interestingly rich development of Cistercian choir may be mentioned at this point. It is illustrated at the monasteries of Riddagshausen, Ebrach, etc. (Figs. 384 and 385). These choirs replace the ordinary plain Cistercian square apse with square flanking chapels. They are provided with both ambulatory and a complete line of contiguous chapels, but these are not radiating and the outline remains unbrokenly rectangular. It is rich and yet far less effective than the circular end-

386—Choir of Abbey church, Chorin. (From Hartung.)

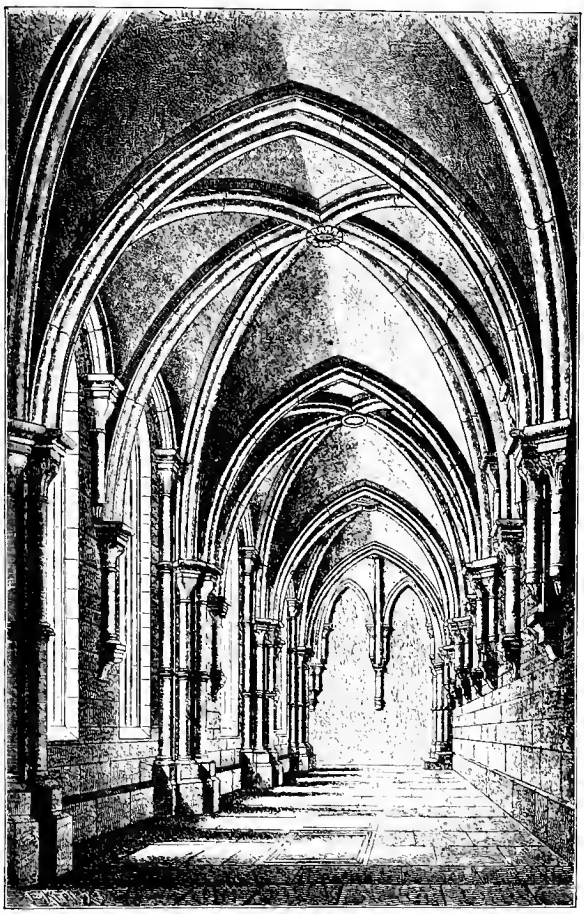


387—Plan of Cistercian monastery of Maulbronn. (From King.)

ing. English Cistercians tried the ambulatory, but not very extensively (Byland, Dore), and never with the chapels, so this German Cistercian scheme seems unique. Germany owes much to the Cistercians not only in stone but in brick architecture. Heiligenkreuz, Lilienfeld and Maulbronn for stonework, Lehnin and Chorin for brickwork, were works of the first rank and served as (Fig. 386) models. In cases such as the Swabian monastery of Salem and the Austrian of Zwetl, the conservatism we associate with the order is replaced by a daring originality that showed the way to the cathedral builders.

The group at Maulbronn is famous as one of the best-preserved transitional and early Gothic monastic establishments in Europe. The plan is given in Fig. 387, with the typically plain façade and closed porch. One always knows the distribution of the various units in a Cistercian establishment: the Chapter-house in the centre of the wing

next to the church (K); the Refectory (F) opposite the church, with the Fountain-house (G) opposite its doorway. The view of the cloister in Fig. 388 shows several Cistercian ear marks which when they are met elsewhere almost inevitably prove a direct or indirect influence of the order. They are: the banding of the shafts and the breaking

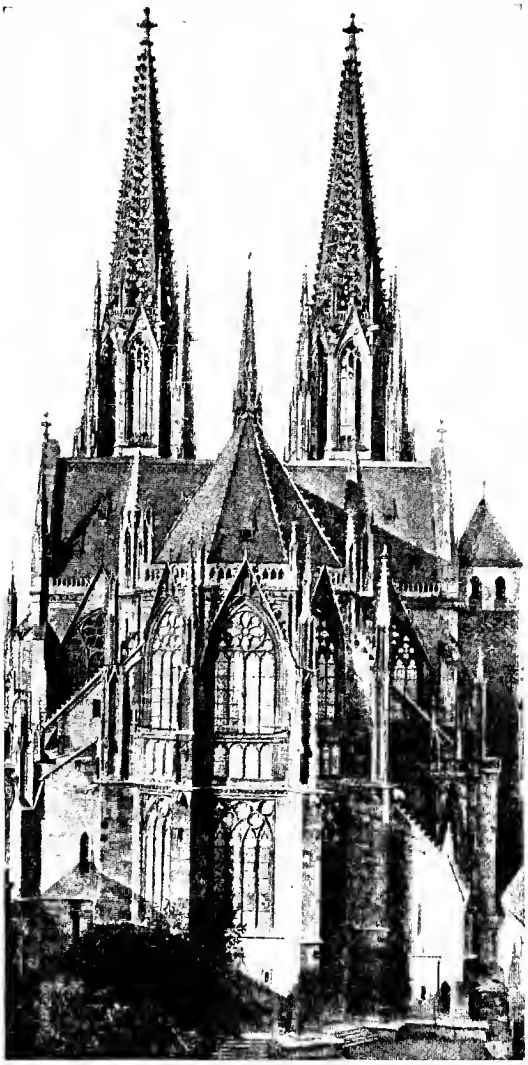


388—Cloister of monastery, Maulbronn. (From Dohme.)

of the vaulting shafts to rest on brackets, corbels or *culs-de-lampe*. Another characteristic is the use of very heavy ribs. We will now return to the study of the process of assimilation and the development of a specifically German type.

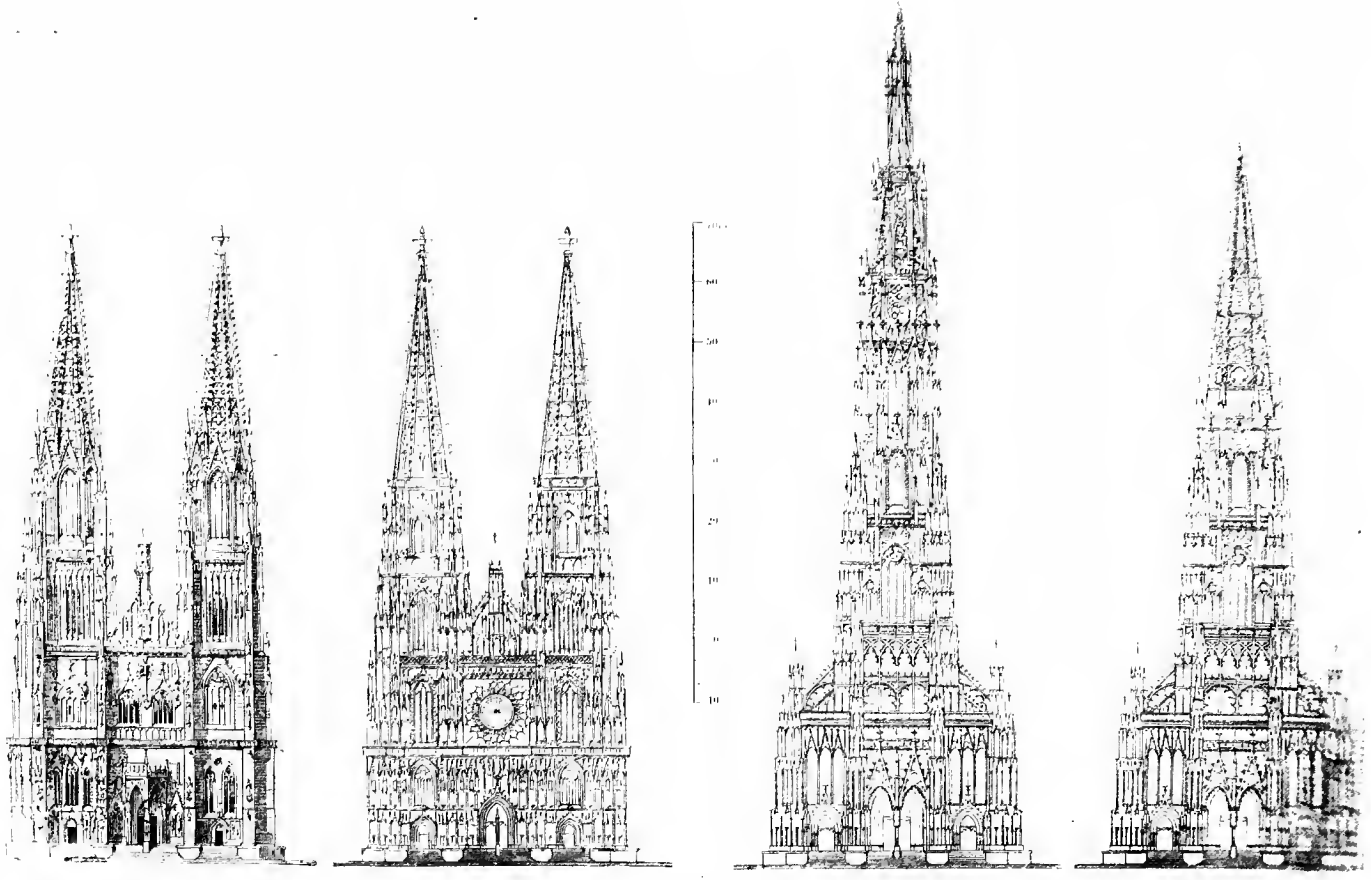
The South.—As an illustration of the continuity of tradition, noticed at Halberstadt, that often obtained in buildings begun after c. 1270, the cathedral of Regensburg in Bavaria may be cited. Its choir and

transept were built between 1275 and 1309. The view of the exterior of the choir in Fig. 389 shows a purity of style and a logical development of tracery that keeps pace with the best French work later than c. 1250, as instanced in the gallery between the large windows. The proportions, also, are perfect; a branch of Gothic science in which German architects were too often deficient, even in such buildings as Freiburg cathedral. The plan was certainly the work of an architect educated in France, who also oversaw the building of a large part of the choir (except the upper part), the lower part of the south transept and the beginning of the south aisle, according to Dehio; but he was forced to reduce and simplify to suit German ideas. His French models were Burgundian, perhaps St. Benigne at Dijon.

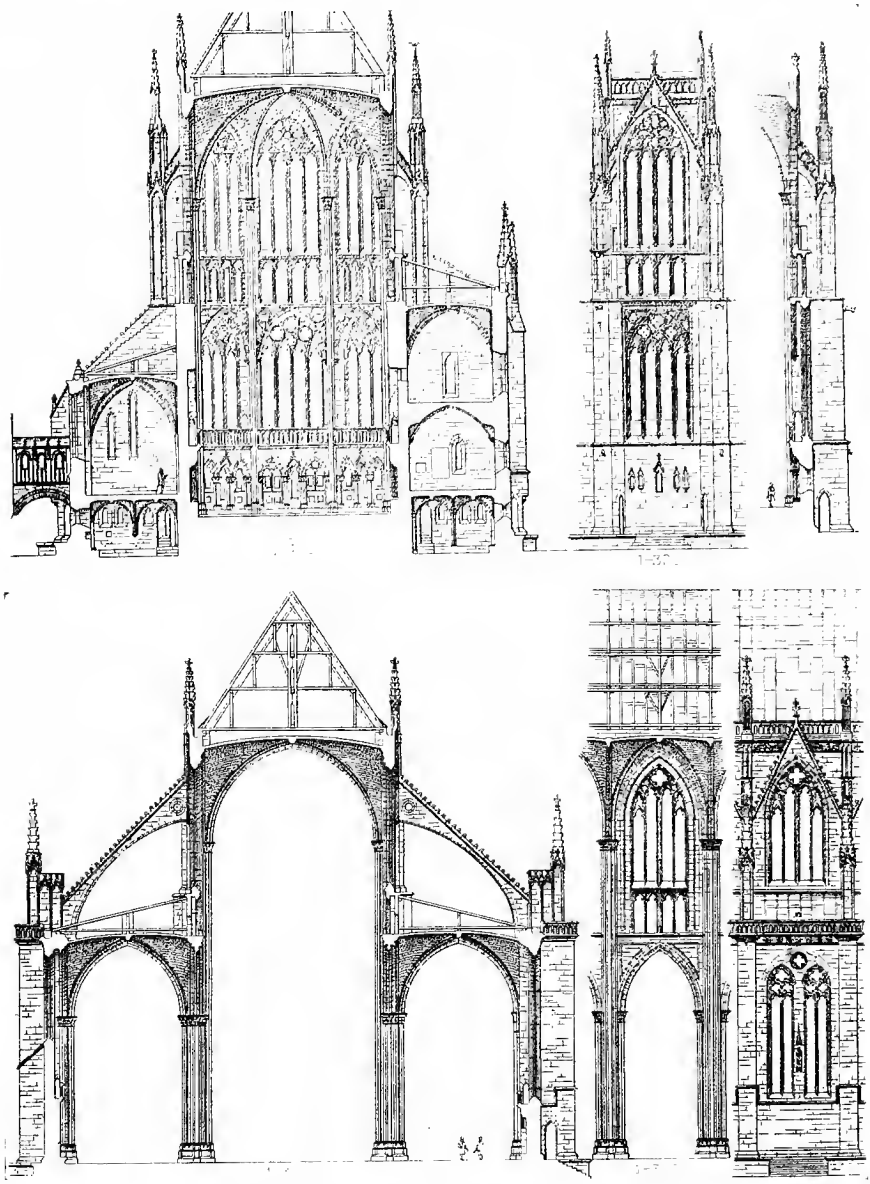


389—Choir of cathedral, Regensburg. (From Joseph.)

The body of the church followed slowly, for the most part shortly before and after 1400, but on the old scheme. It was not until toward 1500, however, that the façade was completed, on the scheme of one of the Roritzers, who were perhaps the foremost of the German geometricians in stonework of the fifteenth century. In Fig. 390 have been placed, side by side, three *projets* for this façade, on which I shall comment later, and on the left the façade



390—Façade of cathedral, Regensburg. The façade as built is on extreme left. The other three are original *project* drawings that were not carried out. (From Adler.)

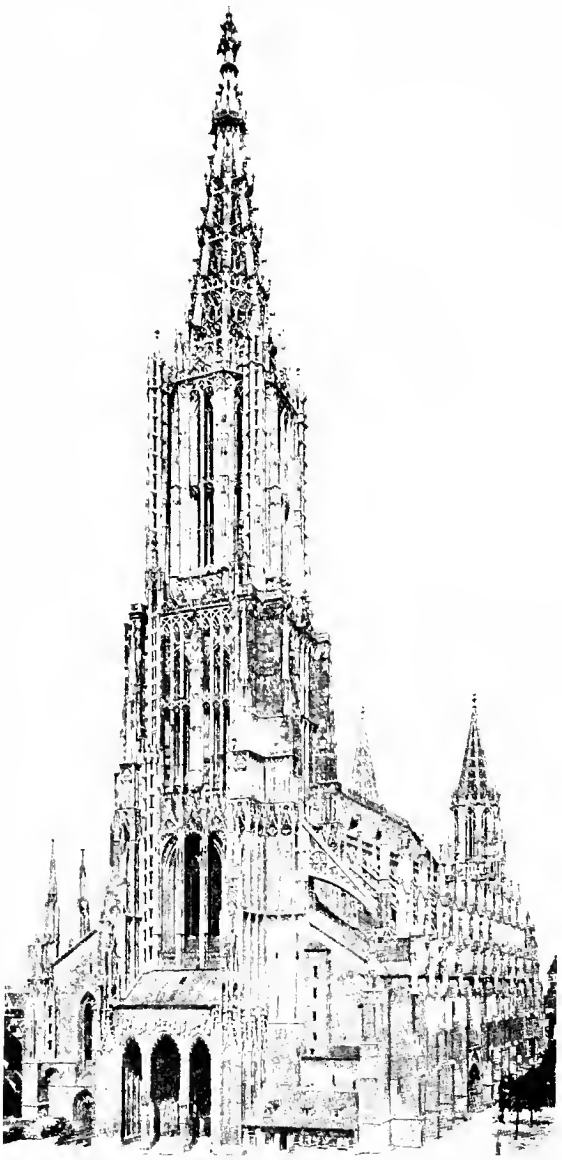


391—System of cathedral, Regensburg. (From King.)

as it was actually carried out, the gable being completed by Matthäus Roritzer toward 1486.

It is curious to note the simplicity of its plan as compared with a typical French cathedral, differing in this from the Rhenish cathedrals. It is a simple basilica with three aisles, each ending in a plain polygonal

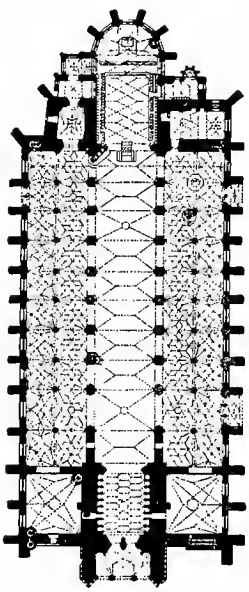
apse; it is without radiating chapels or ambulatory or projecting transept. In this simplicity it is important as setting an example in Germany in about 1275 which was potent in determining the national ground plan schemes. For this reason it is illustrated here in unusual detail, in Fig. 391, where the upper half relates to the choir and the lower half to the nave. This brings out clearly the development of glazed surface in the choir where even the angles are glazed in the lower clearstory. The gables in the upper clearstory would, if designed before 1300, show the influence of Champagne. There is a curious archaicism in the lower clearstory of the nave—probably a Germanicism which fails to make the units coalesce. There is a notable reduction in the height of the vaulting of the nave in relation to the width of the building, when compared to French interiors, apparently in order to bring the proportions of the total width and height of the building into the scheme of the equilateral triangle—a proportion more Romanesque than Gothic. This relative lowness of the nave made it unnecessary to have more than a single battery of



392—Cathedral of Ulm, after completion of tower. (From Joseph.)

flying buttresses. These and the buttress piers retain the simplicity of design prevalent previous to 1275, and give the feeling that the architects of the fourteenth and fifteenth centuries had followed the drawings of the original architect—a theory made exceedingly probable by the preservation even to the present day of so many of the original drawings of the German cathedrals.

An example of a national German monument is the cathedral of Ulm. It is the largest medieval church in Germany. It is also the finest example of the developed style in the south.[1] The recent erection, or rather completion, of its enormous tower has now made it unnecessary to use one's imagination as to its exterior. It is the culmination of the type of Freiburg cathedral, and the tower is over 500 feet high (161 met.), the highest in existence (Fig. 392).



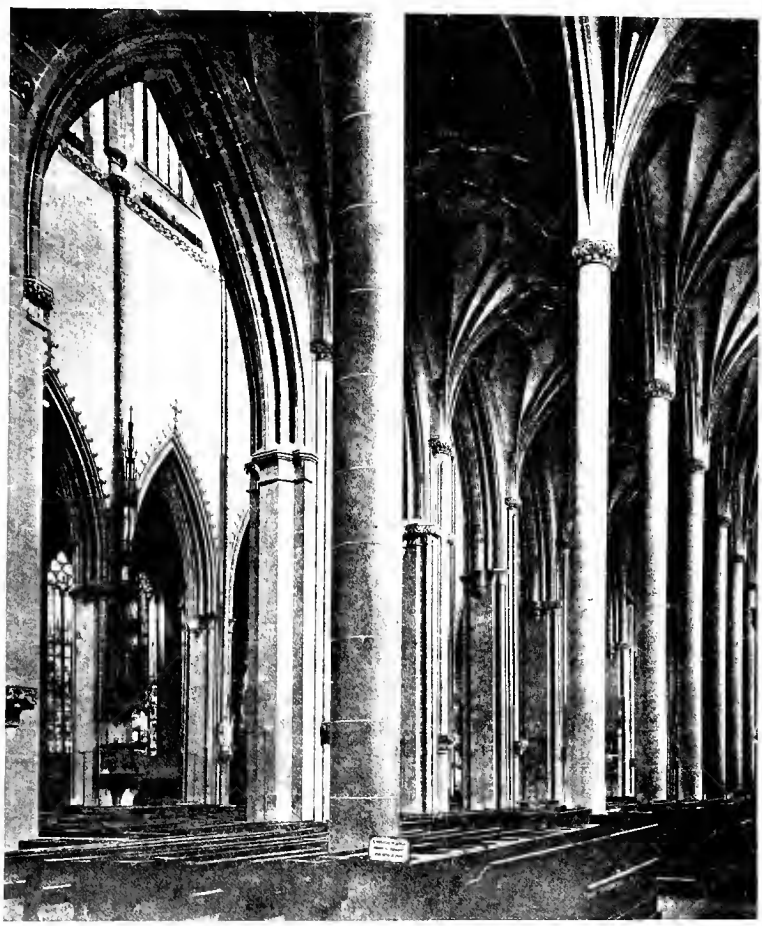
393—Plan of Ulm Cathedral. (From Dohme.)

The plan in Fig. 393 shows the simplest form of German choir, practically nothing but a lengthened basilical apse and the entire plan is that of a five-aisled basilica without transept, as Regensburg was that of a three-aisled basilica. The two towers flanking the choir act as a balance to the central tower, in front of which the triple porch is inordinately stilted in order to avoid being dwarfed. In connection with this tower it is interesting to note that it has been built according to the original drawing made by the architect of the cathedral, Mathäus Röblinger, who designed the façade and tower soon after 1477. Evidently it was begun on a smaller scale, to be only as wide as the projections on either side of the apse. Ulrich, who gave it the five-aisled scheme would certainly have planned a richer choir.

The view of the interior given in Fig. 394 is the most characteristic, far more so than one taken in the nave, which would have been comparatively commonplace even if impressive. But this view from the right hand end of the outer aisle, shows how the architect skillfully combined the beauties of a hall church with the scheme of a high

[1] The square content in meters is: at Ulm 5100 sq. m.; at Strassburg 4100 sq. m.; at Vienna 3200 sq. m. The greater dimensions of Cologne (6200 sq. m.) do not count as the nave is modern.

central nave by two expedients: by elevating the spring of the aisle vaults quite high above that of the nave arcade and by making the correspondingly elevated middle shafts extraordinarily slender. The main objection to this is the awkward lack of functional connection with the arcading of the nave, and the curious space left between its



394—Interior of Ulm Cathedral from further aisle. (From photo.)

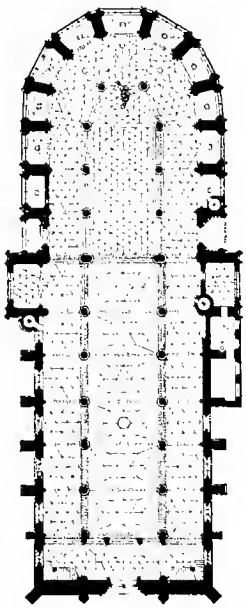
archivolts and the wall ribs of the aisle vaulting. The ribbing of these aisle vaults is characteristically flamboyant, even though resting on well marked capitals. The crossing of the ridge ribs and diagonal ribs is a commoner feature in Germany than in France and interferes here with what would otherwise be a fan-shape effect. The workmanship at Ulm, both outside and inside, is the best in Germany, and

illustrates the remarkable virtuosity attained by the stone-mason guilds of Swabia, Franconia and the Rhine provinces between 1350 and 1425. The history of the building shows that though begun in 1377 at the choir it was not until an architect of genius, Ulrich of Ensingen, was put in charge in 1392, that its building assumed paramount importance, involving both widening and lengthening. He seems to have been the author of the final plan. Two generations of the same family followed, completing the main vaults in 1471 and the aisle vaults in 1478. All critics remark on the contrast between the richness of the exterior, especially the façade and the severity of the interior, so apparent in the nave, with its expanse of flat wall surface similar to that at Freiburg. This was the consequence of the decision of the architect not to employ the pavilion-roof scheme of Cologne over the double aisles but the less dangerous lean-to roof. The view given in Fig. 392 shows this clearly and illustrates the enormous length of unsupported and highly decorated flying buttresses, which is another proof of the daring of these German masons. The height of the nave, 42 met., equals Amiens. Until Böblinger took charge in 1480 the great western tower had not progressed far if at all above the portal. It is interesting that at the very time when the committee in charge of the work at Regensburg cathedral was obliged to decide between a single tower and a double tower façade and did so in favor of two towers, the Ulm architect was busy building the three lower stories of the greatest single tower ever planned.

In connection with the cathedrals of Ratisbon (or rather Regensburg) and of Ulm it is in point to call attention to these drawings of such cathedrals including also those of Strassburg and Cologne. Some of these are of large size and on parchment, e. g. those of Cologne and Ulm. They belong to the century and a half between c. 1300 and 1450. Some are original; others seem to be copies of lost originals. Some remain as *projets* that were not accepted; others were evidently rejected; while others again formed the basis of the work so far as it was carried on. They have been of immense practical importance in modern restorations and completions. For instance, in the splendid tower at Ulm, the original plan of the architect Böblinger was followed, because he was in charge of the cathedral when the completion of the tower was planned and his drawing, still preserved, would have been the basis of the work had it been carried to completion in the fifteenth century. We have already seen how such drawings enable us, in the

case of the Strassburg façade to see how the original plan of the thirteenth century was modified in the fifteenth century, to suit the new ideas. Now, in the case of the Regensburg façade the three drawings that are preserved were none of them followed in the construction. They evidently date from the late fourteenth century, and were prepared in competition by different architects or as alternate schemes by the same architect, so that the chapter of the cathedral and its advisers might decide whether they would prefer the single tower or the double tower type. It has been noticed that while a two-tower design was used it embodied some of the features of these central tower drawings, notably the small porch and the windows.

Shortly before Ulm gave such fame to the Swabian school an important church had been commenced at Gmünd, that of the Holy Cross (1351–1414), by the founder of the same family of architects named Parler who worked at Prague and throughout Germany and even in Italy (Milan cathedral). This church at Gmünd and the ideas (Fig. 395) of the school established the supremacy of the hall type not only in Swabia but far beyond it. The choir ambulatory, as well as the aisles, was given the hall elevation; and the placing of the towers in projection obviated the usual heaviness at the entrance. The plan shows the elaborate systems of vaulting ribs developed in Germany during the fourteenth century. Several varieties are here combined of star and fan and reticulated designs. It made possible the use of only four ambulatory supports to correspond to eight chapel piers. Also in Swabia the Frauenkirche at Esslingen was in part by the same architects as Ulm cathedral and shows the same scheme of a central tower at the façade. It was begun in 1360, some time before Ulm, as a three-aisled hall church with a high-pitch roof covering nave and aisles. A later and even more beautiful version is the west front of the Marienkirche at Reutlingen (Fig. 396).

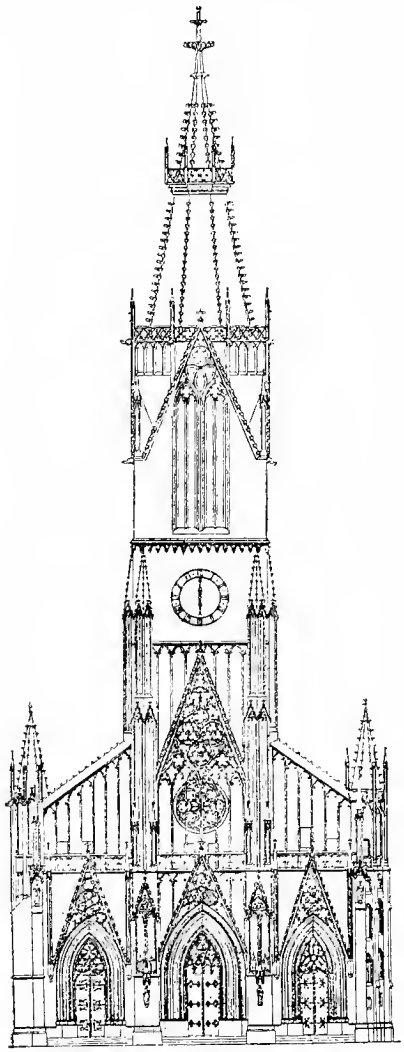


395—Church of St. Cross at Gmünd. (From Dehio.)

In examining into the origin of the spread of the hall scheme at this time, Dehio believes that it came to Gmünd from Austria, e.g. from Zwetl and the cathedral of Vienna. On the other hand the hall type

was known in Westphalia as early as the thirteenth century; this is proved by the cathedral of Minden.

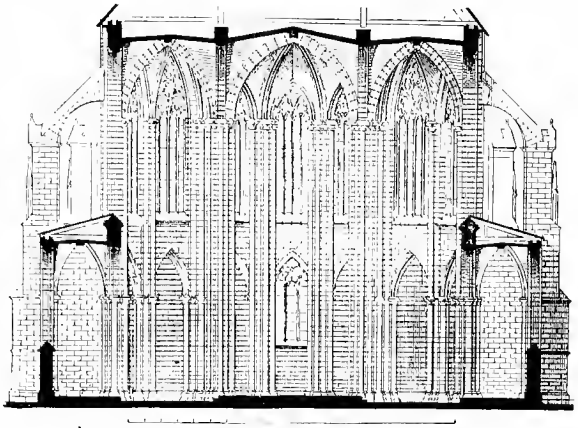
At Zwetl, in 1343, we see an interesting innovation in the plan of the choir of this Cistercian church, an early example of the plain polygonal outline with a larger number of sides than those of the inner polygon of the ambulatory. This produced a series of irregular vaulting compartments in the ambulatory and so increased the constructive difficulties, but the idea became, nevertheless, fairly popular as it gave greater freedom in designing apses. It was followed almost immediately (1351) in this epoch-making church of Gmünd in Swabia, and in some Bohemian churches; and then, later, in such churches as the Frauenkirche at Ingolstadt. The form was, of course, a modification of the plan of the Halberstadt choir (see Fig. 381). It is illustrated in Fig. 395. This intromission into the general movement of the south makes a few remarks on Austrian architecture necessary



396—The Marienkirche at Reutlingen. (From Dohme.)

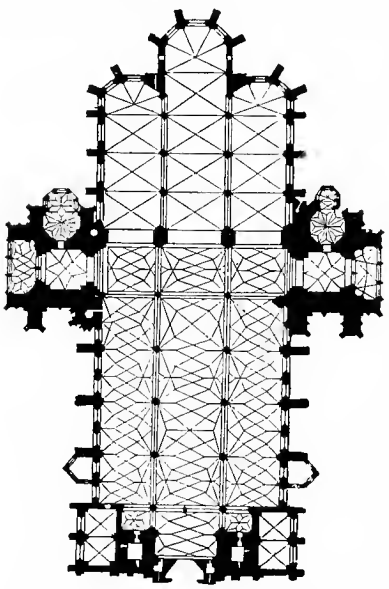
In Austria one must distinguish between the German provinces, including Vienna, Bohemia and Hungary. It is an interesting circumstance that while Austria was, quite naturally, later than the Rhenish provinces and Swabia in joining the movement, she soon became an important factor in nationalizing it by her frank adoption and development of the hall-type in a way that reacted strongly upon the north during the fourteenth century, by means of buildings like St. Stephen of Vienna and the Cistercian abbey church of Zwetl. Another noticeable thing is the prominence taken by monastic establishments,

far greater throughout Austria than in any other part of Germany. Large cathedrals, we shall see, were infrequent. In this the Cistercians took at first the lion's share to be followed by the Franciscans, Dominicans and their offshoots. The hall-like effect of the interior of the Zwetl choir is given in the section in Fig. 397, with its massive piers. How in brick architecture the windows as here are given an excessively lancet form has already appeared in the Chorin choir (Fig. 386) with a noble simplicity and lightness.



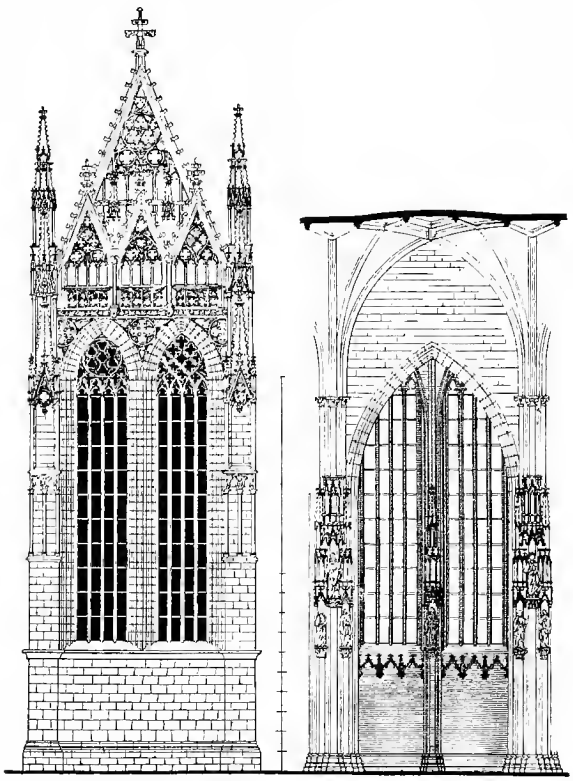
397—Choir of monastic church, Zwetl. (From Dehio.)

In the dearth of important cathedral structures in Austria proper, the cathedral of St. Stephen at Vienna has a unique interest for this region, notwithstanding its unfinished state, because it is its most monumental early embodiment of the hall-church type, and because of its splendid tower. It belongs to two distinct periods, which even the plan will make clear: a choir of the fourteenth century (completed 1340) and a nave and tower mainly of the fifteenth century, commenced in 1359 (Fig. 398). The transept is nothing but the basement of the two enormous flanking towers, which were planned to be the most monumental existing in this position. Only one of these, that of the south transept, was completed. Another peculiarity of plan is that the aisles almost but not quite (four-fifths) equal the width of the nave; and practically the same ratio was given to the



398—Plan of cathedral, Vienna. (From Dohme.)

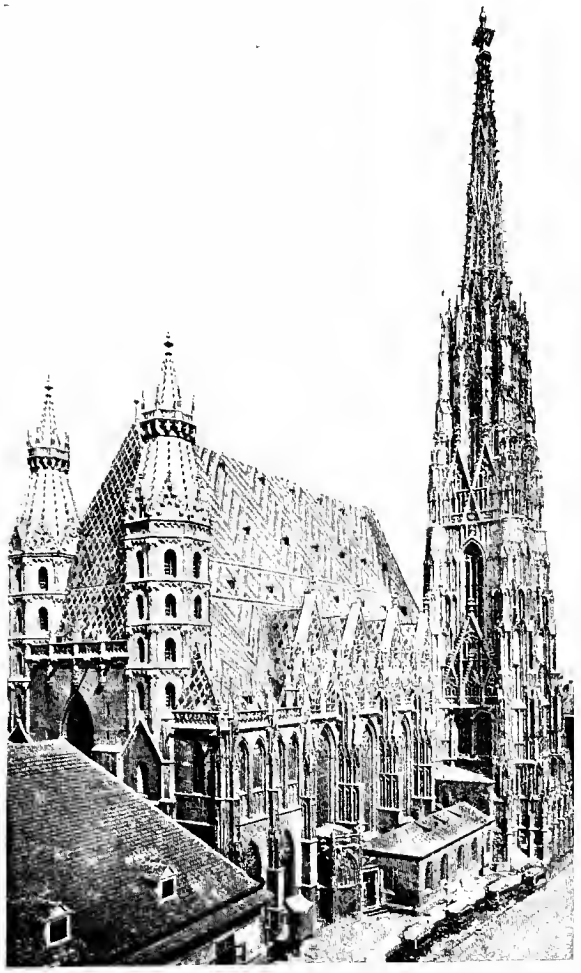
elevation of their vaults, so that there is no flat wall space in the main nave even though the springing of its vaults is at a slightly higher level. The grouping of the vaulting ribs is extremely awkward. The structural form of the masonry is substantially that of a continuous pointed barrel vault intersected at each bay by another barrel vault on a much lower level, the adjustment of the surfaces being by means of inverted pyramidoidal conoids (Fig. 399). The setting of the spring at so low a level brings quite a mass of masonry into these conoids with peculiar effect. The absence of capitals, the multitude of mouldings to the piers rising uninterruptedly to the vaulting gives something like the effect of the spray of an architectural fountain. This is secured partly by projecting the mouldings so as to practically make them free from the central circular shaft with which they are connected only by a narrow necking. The use of pier statues and tabernacles is the worst in Germany. The clearstory is enormous and is crowned by an extraordinarily rich traceried gable.



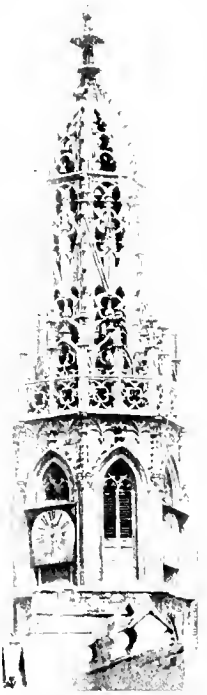
399—Bay of Cathedral, Vienna. (From Dehio.)

Nothing can redeem the exterior in its unfinished state. The single roof with its inordinate pitch dwarfs the great tower and would have dwarfed the western façade. It is the ultimate expression of this most unfortunate of Germanic peculiarities. There is the closest connection between the great southern tower and the Regensburg towers, not completed till after 1500, and as the Vienna tower was

completed in 1433, it must be regarded as the greatest work of its class since the Freiburg and Strassburg towers. It is clear from the projection of the two bays next to the façade that two equally enormous western towers were planned, as wide as the aisles, completing a



400—Vienna Cathedral. (From photo.)

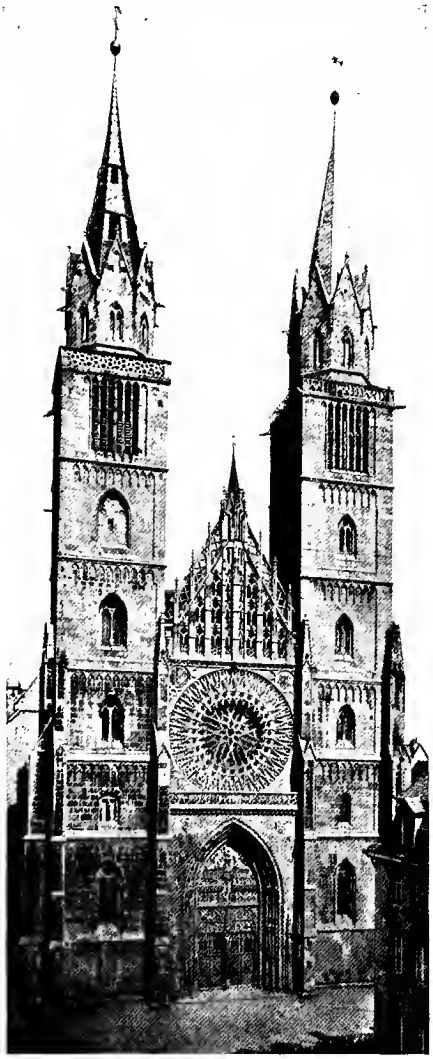


401—Spire of Church of Maria Stiegen, Vienna. (From photo.)

quartette which may safely be said to compose the most lavish and unrealisable scheme planned during the Gothic era (Fig. 400).

Before leaving Vienna it will be interesting to see how the local school produced a peculiar late form of openwork spire which is strongly affected by the domical outline. It is the charming tower of St. Maria Stiegen (Fig. 401).

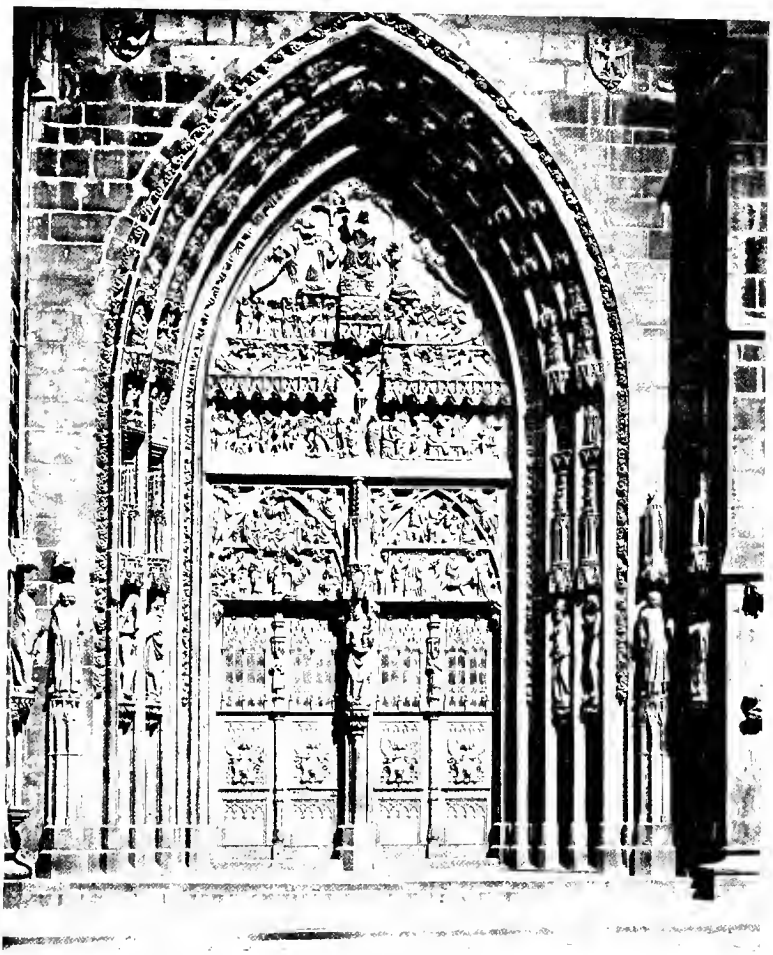
Before studying the non-Germanic provinces of Austria it will be more logical to complete our survey of the other provinces further north and west, especially in Franconia, Bavaria and Saxony.



402—St. Lawrence, Nuremberg. (From photo.)

There are at Nuremberg, in Franconia, three works of the thirteenth to fourteenth centuries, that are typical of very different currents and illustrate the fact that one cannot find homogeneous local schools in Germany; although there does appear to be some correspondence between Franconian and Swabian work. These are the churches of St. Lawrence, of St. Sebald and the Frauenkirche. The contrast appears at once in the two façades. In the St. Lawrence (Fig. 402) façade we see the evolution of the old Romanesque type such a appears at Limburg, etc. Its general scheme belongs to the close of the thirteenth (after 1276), but most of the work to the following century, such as the main portal, the rose-window, the gable and the spires. All this part conflicts in its decorative feeling with the plain and archaic towers. Comparison with Strassburg shows Germanic perversions of design in every part, and even Marburg, though earlier, has a more advanced unity (see Fig. 359). The interior of St. Lawrence has the same contradictory effect in its low aisles and relatively high nave; good, clearly articulated piers and arches, but above them a perfectly plain expanse of wall without gallery or triforium and only an insignificant clearstory. The same contrast reappears in the decoration.

There is none of the rich ornamental foliage and architectural detail of the Rhenish schools, but a rich development of figured sculpture. The main portal (Fig. 403), while inferior in its statuary to the best Rhenish work, introduces a rich grouping of superposed rows of bas-reliefs in the field and is highly decorative.



403—Main portal of St. Lawrence, Nuremberg. (From photo.)

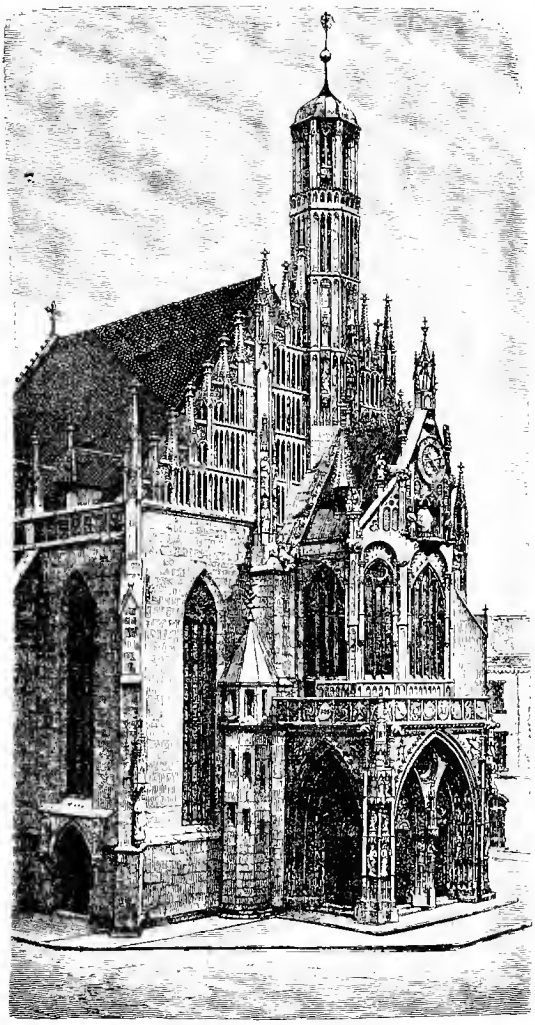
The small Frauenkirche (1355–61), in reality a chapel, is a charming and simple example of a three-aisled hall-church, though too low in its vaulting for symmetry. This is redeemed by the delicacy and height of the columns (Fig. 404). Its façade is interesting as furnishing a third type, differing from those with either the double or the single

tower arrangement. It has the form of the single, rather acutely pointed gable, of stepped pyramidal outline with pinnacles, such as is to be found so commonly in German houses. This is relieved by a charming closed porch (Fig. 405) in two stories, with the rich sculpture which had become characteristic of Nuremberg.

404—The Frauenkirche at Nuremberg. (From Dohme.)

The third church, of St. Sebald, is perhaps the most interesting. The nave (Fig. 406) with its apse is of archaic type, built soon after 1200. It might, in fact, have been fairly introduced between Magdeburg and Marburg in the stylistic sequence. It belongs to a small group of buildings due to the influence of the Cistercian monks from Burgundy. This is evident in the rectangular piers and in the heavy vaulting shafts that do not descend to the floor level but end in corbels.

The gallery, however, comes from a non-Cistercian source. The interrupting of the architectural memberment is a characteristic German feature, which appears, for instance at Magdeburg, Bamberg, etc.



405—Façade of the Frauenkirche, Nuremberg. (From Dohme.)

This church belongs to the old type with a choir at each end, so beside the simple east apse that is shown in our view there was added in 1361–77, at the west end, a superb choir which quite overshadowed the nave. The interior is a three-aisled hall with slender octagonal piers with engaged vaulting shafts, which, in the absence of capitals,

connect directly with the ribs—a peculiarity which became current only in the flamboyant age. The single row of windows has here (cf. Chorin), replaced the double row, which had been current in the thirteenth century, at Trier and Marburg. This new type of choir is splendidly illustrated at Erfurt, Soest, etc., and the views of it that follow will serve to give an idea of the Nuremberg choir as well. A good instance of it by the Rhenish school is at the cathedral of Aix-la-Chapelle (see Vol. I, p. 128).

406—Nave of St. Sebald, Nuremberg. (From Michel.)

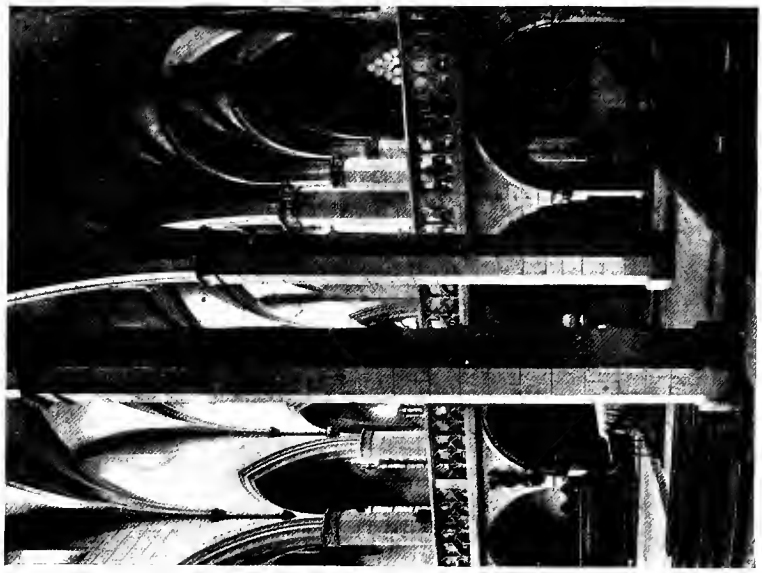
One of the finest pieces of middle Gothic in Saxony is this choir of the cathedral at Erfurt. The view here given in Fig. 407 shows it in process of restoration. This has already included the reëstablishment of the upper balustrade and pinnacles. The arched substructure is unusually effective and harmonious, adding strength to the vertical lines. It extends around the right side until it joins a monumental stairway that leads around past the north transept to a beautiful portal on the upper level by which one passes into the nave. The main body belongs to the thirteenth century and ends at the two transitional towers with the later central belfry, which is an interesting Germanic feature. Beyond them was originally an insignificant east end for which the present masterly example of fourteenth century work was substituted between 1349 and 1370. There is no finer

group of the long slender windows which then became the favorite form, as is seen in several other choirs of this type, such as that of St. Sebald in Nuremberg. The plan has three straight bays beyond the towers and then the seven-sided end. The view of the interior in Fig. 408 shows a hall effect with a great deal of stately symmetry, and a use of lierne and tierceron vaulting that instead of interfering

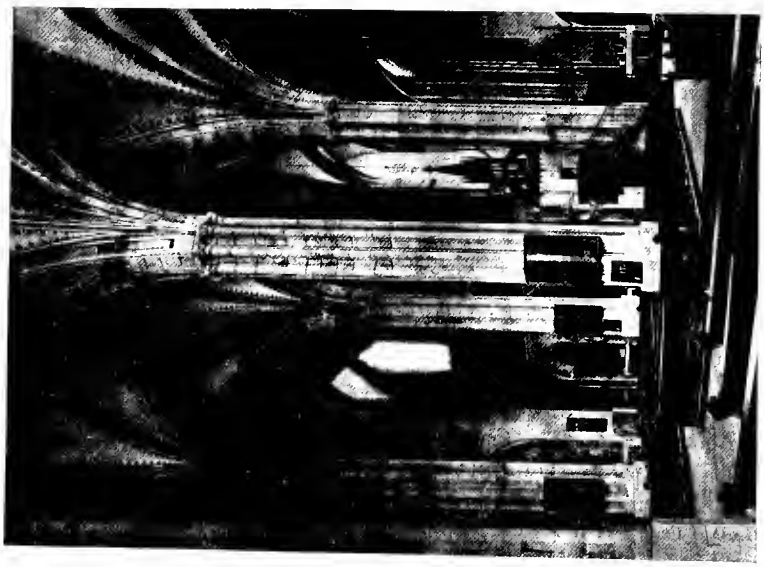
407—Choir of Erfurt Cathedral. (From Gurlitt.)

adds to the rhythm. The outline of the piers is lightened by the use of deep and heavy channelling separated by slender shafts against a narrow face.

There is another remarkable church in Erfurt, somewhat earlier than the choir of the cathedral: the church of the Dominicans, a simple three-aisled basilica, built shortly before and after 1300. In Fig. 409 the interior is given from the choir end with the interesting arched *jubé* separating it from the nave. The immense height and



409—Church of the Dominicans at Erfurt. (From Gurlitt.)

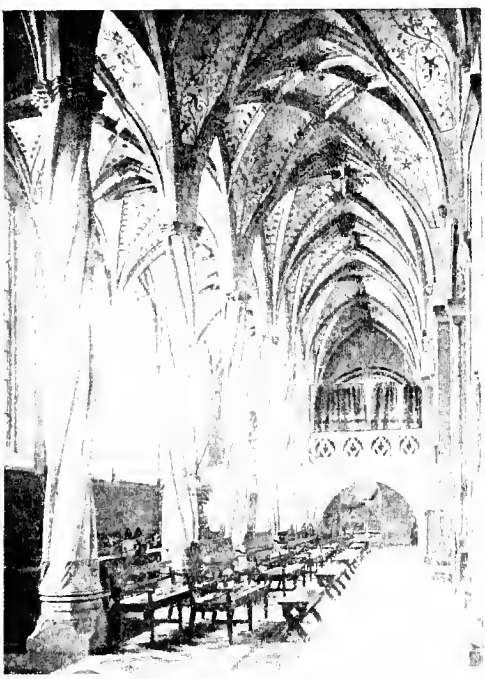


408—Erfurt Cathedral, at transept. (From Gurlitt.)

slenderness of the simple octagonal piers produce practically the hall church effect. It is very interesting to compare this interior with some in the south of France and in Spain, for example that of the cathedral of Palma in Majorca in Fig. 270. The Dominicans were great transmitters of forms and the same pier as we see here also characterises some of their contemporary churches in Italy.

410—St. George at Dinkelsbühl. (From Joseph.)

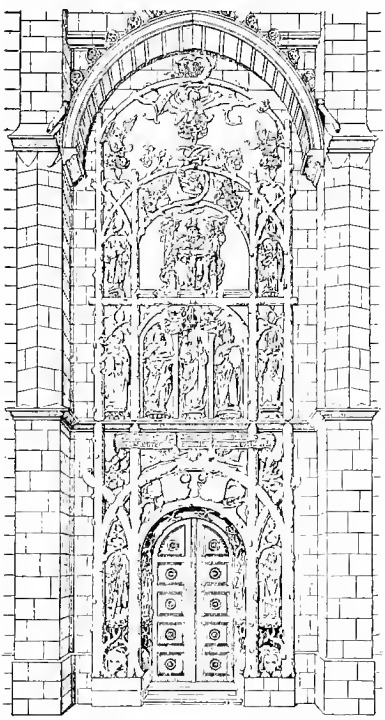
During the fifteenth century the changes of style in Germany are not as drastic as in France or England because less importance was given to decorative work. Flamboyant *motifs* were borrowed from France and England: perpendicular *motifs* from England. But these features did not dominate as they did in other countries, and German architects by developing the plans and proportions which they had evolved during the fourteenth century, exaggerating the elongated effects and the spacious hall interiors, emphasising the dry and thin style that went with this manner, diverged very far from the early Rhenish type of the thirteenth century. The constructive scheme of the vault-



411—Aisle of cathedral, Braunschweig. (From Dehio.)

ing was no longer similar to the French but approached the form of a barrel vault along the main axis, intersected by other lower barrel vaults joined to the higher vaulting by pyramidal conoids. This and other traits we have already seen illustrated in a number of buildings, such as St. Stephen at Vienna. An excellent example in Swabia is the interior of St. George at Dinkelsbühl (1449–1499), by the architect Elser (Fig. 410). It is a more symmetrical design, more dignified and better articulated than its larger Viennese predecessor.

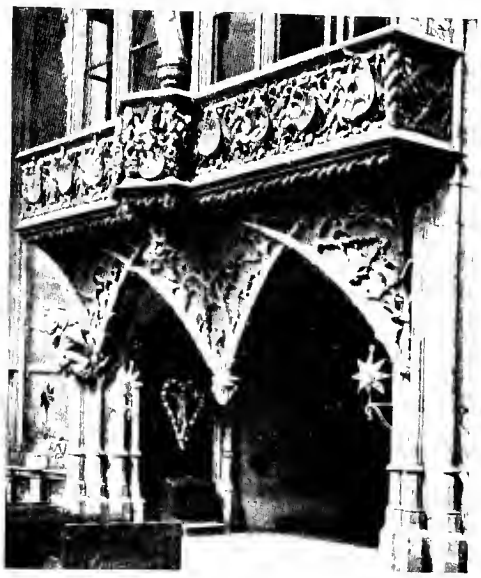
Two forms of fantastic design ran riot toward the close in certain parts of the centre and south: the deformation of structural features marked the first, and the introduction of arboreal and plant life the second. Both were vicious tendencies that found vogue only in the parts of Germany that were partial to extreme decorative effects. A view of the left-hand side aisle of the Cathedral of Braunschweig (Brunswick) in Fig. 411 illustrates the first form in the twisted spiral shafts of its piers and in the reversal of their curves in every other pier. The vegetable aberration, combined with figured sculpture in a way to force comparison with such orthodox portals as those of Nuremberg in Figs. 403 and 405, appears in about 1514 in the church of the Castle of Chemnitz in Saxony (Fig. 412), based on tree trunks and branches; a design that would suit very well a princely Adirondack camp and which can be compared only to the far more artistic use of such motifs in the Manoelino style of Portugal at about the same time. Another side of the same school is illustrated in the decoration of the vaulting of a chapel in the parish church at Ingolstadt, where coral-like branches and octopus cones hang down from an elaborate ribbing; or in the balcony of the royal oratory of the cathedral of Prague (Fig. 413) where a pair of half-vaults with wall ribs have similar fantastic



412—Portal of castle at Chemnitz. (From Dehio.)

branchings. There is more of this sort of architectural debauchery in Germany than in any other country. Yet, no style could be its more ferocious antithesis than that other German product the northern school of brick design.

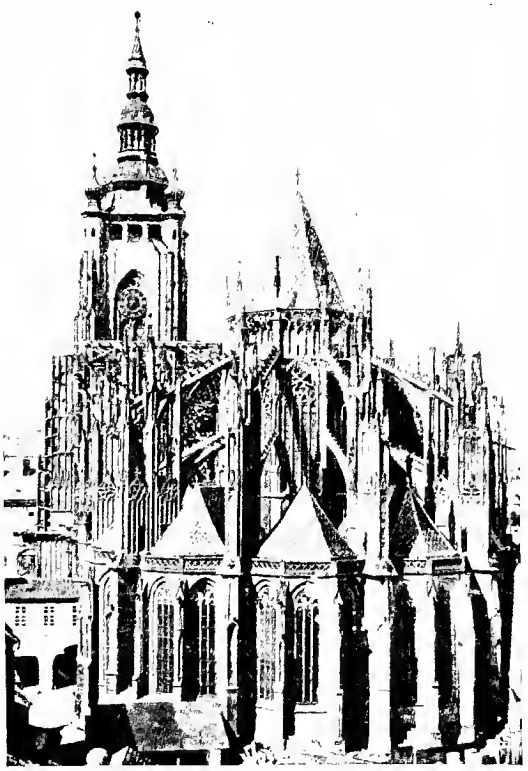
Bohemia. The most ambitious churches of Bohemia either were never completed or were more or less thoroughly destroyed by the Hussite vandals in the fifteenth century. Of the cathedrals of Prague and Kuttenberg, which were planned on the largest scale only the choirs were built. The usual initiation by Cistercian monks to the new style took place between 1220 and 1250. It came not directly from Burgundy but from Germany. Such German monasteries as Tishnowitz, Ebrach and Riddagshausen furnished both monks and architectural models, and there are no traces of any special local traits in the buildings at the Bohemian monasteries of Ossek, Nepomuk and Hradiste which were in advanced transitional style, largely of the Franconian type. More advanced were three monasteries of the close of the thirteenth century in southern Bohemia: Hohenfurth (c. 1260), Goldenkron (c. 1280) and Sedletz (c. 1300). It was, in fact the buildings of Sedletz which first revealed to the Bohemians the full glories of the new style, though on a small scale the church of St. Ann had already (1246) introduced pure Gothic to the capital, Prague. The destruction of Sedletz, Ossek (except cloister and chapter-house) and the rest prevented a complete realisation of the point to which the Cistercians carried early Gothic in the south of the country, but they appear to have failed to awaken any enthusiasm.



413—Entrance to Royal Oratory at cathedral, Prague. (From Leger.)

During all this time, in fact until 1350, the work of these foreigners seems to have been unable to develop any native schools of Gothic architects. When plans were, therefore, made on a large scale in

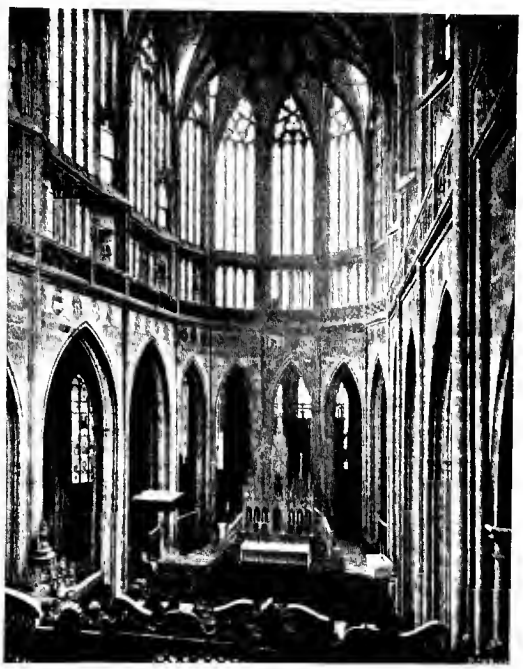
1344 for a new cathedral in Prague, which would have been larger than Ulm, a Master Matthias of Arras was called from Avignon, in France, to direct the work. He and his successor, a German, Peter Parler of Gmünd, were able to build only the choir, which remains, fragmentary as it is, the most charming bit of Gothic work in the country. The French type is followed, of course, in the plan, with its deambulatory and five polygonal chapels, and the influence of southern France in particular (e. g. Narbonne), appears in the continuation of the line of chapels along the choir nave, in place of open aisles, and the lack of capitals in the main arcade. Northern characteristics, however, seem to be the pavilion roof for each chapel, and the multiplication of window lights (German-Flemish). The rich juxtaposition of parapets, pinnacles, gables and panelling, the cusping and crockets of the two-storied flying buttresses, and the elaboration of the geometric tracery, especially in the enormous clearstory windows, are characteristic German traits Figs. 414 and 415; showing that while it is to the French architect we owe the plan, it was to the German that most of the upper part of the construction is due.



414—Choir of cathedral, Prague. (From Leger.)

Practically the same proportion of the church of St. Barbara at Kuttenberg was built (1386). In this choir, attached to a five-aisled nave, the architect Peter Parler had a free hand. The French element of projecting choir chapels is consequently eliminated, and the German scheme substituted. The eight choir chapels are here embedded in a solid mass of masonry, forming a continuous circle and giving a tri-

angular base to the high and heavy buttress piers of the same two-tiered type as at Prague. The terrible catastrophe of the Hussite rebellion put an end to the work here as at Prague in 1419. The scheme is extremely ornate, a development of the Prague type. The close connection established by Peter Parler between these Bohemian works and those in Swabia and elsewhere due to his family and other architects of the Gmünd school is an interesting illustration of the inter-provincial dissemination of types.



415—Choir of cathedral, Prague. (From Leger.)

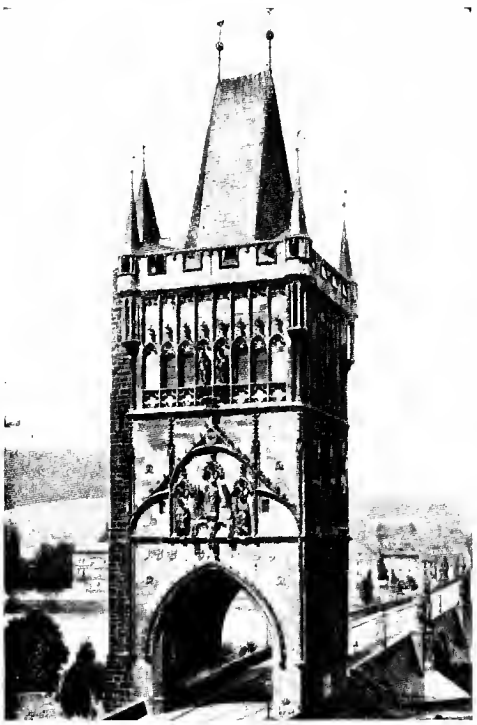
The influence of Peter Parler in Bohemia was as great as his activity. Before the Kuttenberg choir he had built its prototype in St. Bartholomew at Kolin (1360–1378). In both cases the ambulatory has a smaller number of piers than there are chapel piers to the choir; at Kolin it is 4:5 and at Kuttenberg it is 6:7. This would have been a heresy in France and led to strange irregularities of vaulting surfaces. We have already noted this on page 344.

Parler also furnished a charming type of concentric church or chapel in the Karlshoferkirche in Prague (1377). It is an octagon of 22.75 m. with a polygonal choir, and the single vault that covers it is a very interesting combination of a low dome with elaborately ribbed surface merging into fan-shaped Gothic pendentives.

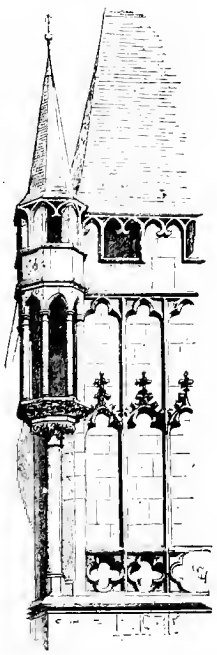
It will not be out of place to refer here to another work of Parler—though it is not ecclesiastical—the great bridge over the Moldau and its gate. It illustrates another form of Germanic art introduced to the Bohemians by this architect. Of the gates that on the right bank is the best preserved and it is the most beautiful in Europe. Being built of stone instead of brick it was susceptible of more artistic detail than its prototypes in northern Germany. Its general lines (Fig. 416) are

happier and Fig. 417 shows how charmingly details are treated grouped under the gable. Later it was reproduced almost exactly in Prague itself in the Powder Tower.

Probably Parler was also the designer of the picturesque chapel of the Town Hall with its *échaugette*. After his death no architect of equal talent appears to have carried on his traditions though his brother and son survived him. Perhaps to this workshop is due the



416—Tower of the old bridge, Prague. (From Leger.)



417—Detail from tower of the old bridge, Prague. (From Viollet-le-Duc.)

west front of the church of St. Mary of the Teyn, with its peculiar towers and inorganic gable decoration, which seems to show German workmanship; the spires with their dormers are more like civil belfries.

In default of church architecture illustrating the last stage of Gothic in Prague, we may make use of the halls of the Royal Castle which belong to the part restored under Vladislav Jagellon (1471–1576). His throne room, built by the architect Rieder in 1502 is one of the most grandiose of the Gothic civil interiors on the continent, with a length of about 265 feet (74 m.). A barbarous modern decora-

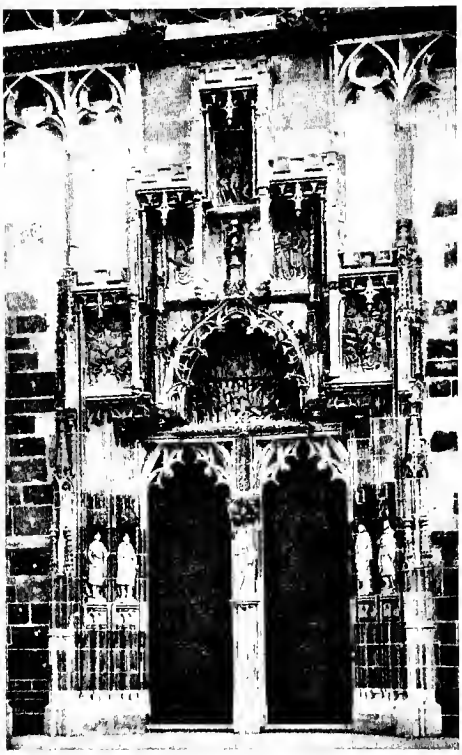
418—Ladislas's throne-room, Royal Castle, Prague. (From Leger.)

tion has almost ruined its effect (Fig. 418), so that it is quite an effort to visualize correctly the vaulting compartments of the flamboyant style, with the fantastic curves of their ribbings "imported from Germany."

At the same time the Germanic hall-type is illustrated in the church at Brüx (1575) where the buttresses are all internal. The choir of Kuttenberg cathedral was continued as a five-aisled structure whereas Parler had planned it for only three, and galleries were built over the aisles to take the main thrusts, a fashion followed in other churches. There is comparatively little rich flamboyant work. In the church at Pilsen, where the design of tracery and vaulting is elaborated it is in reticulated geometrical rather than in flamboyant forms.

419—St. Martin at Kaschau (Kassa). (From Michel.)

HUNGARY.—In Hungary there is hardly any Gothic to be noted. It was largely wiped out by the Turkish wars of the fifteenth and sixteenth centuries. It is epitomized in St. Martin at Kaschau, with a choir of the fourteenth and a nave completed in the fifteenth century, on a plan resembling St. Victor at Xanten. The view in Fig. 419 gives its earliest part, the choir and transept, with vaulting of quasi and flamboyant style, whose approaches are also evident in the absence of capitals for the main piers. The attribution of the design to the French architect Villard de Honnecourt is evidently preposterous, as there is nothing in the work of the thirteenth century, and its origin is clearly Germanic and of the best Rhenish school. The north portal given in Fig. 420 is decidedly original if not admirable in its imitation of the stepped pyramid gable façade and its truncated pointed arches.



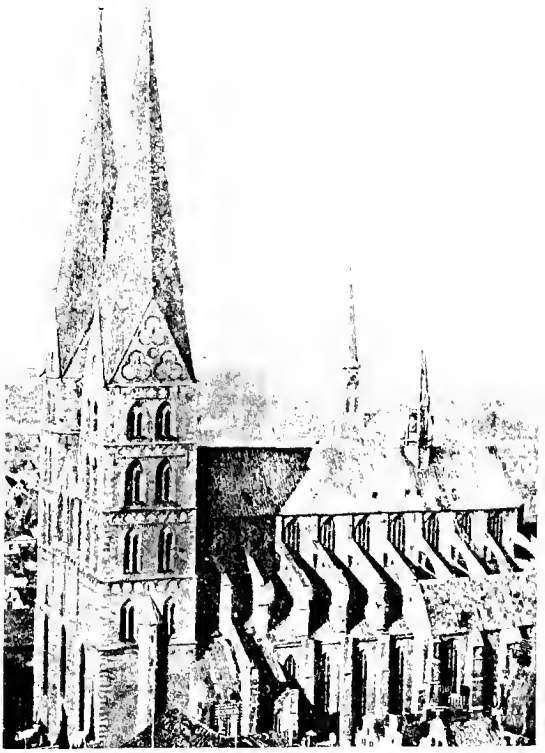
420—North portal of St. Martin at Kaschau (Kassa). (From Handbuch.)

A slightly later stage is illustrated in the Cathedral of Zagrab in Croatia, completed after the middle of the fifteenth century. The façade has a single central portal, a small rose-window surmounted by a triplet of pointed windows, and two towers with open-work spires that betray their Germanic origin; the architect was evidently from the Rhine or Swabia. This German influence can be traced from the beginning of the use of Gothic design. The principal example of transition, the abbey church of St. Ják near Szombathelz, is a splendid piece of pure Germanic work, with an interesting pointed central doorway.

BRICK CHURCHES.—In a class quite by itself is the brick architecture of the far north in Germany. To appreciate its interest it is

absolutely necessary to free oneself from preconceptions based on the norms of stonework, and to bring a fresh and unbiased judgment to bear on these buildings.

The cities of the old Hanseatic League along the Baltic had a special style of brick church which is familiar to most students from the buildings at Lübeck, but which also ruled at Stralsund, Rostock, and especially in Wismar. Instead of the hall-like interior, instead of the tri-apsidal or other usual Germanic choir ending, we find nave and aisles in the normal relation and choirs with polygonal chapels; we also find flying buttresses. Dehio considers the church of St. Mary in Lübeck (Fig. 421) to be the prototype of the entire class. Before it there had been transitional churches of the Cistercian type (Oliva, Dargun, etc.), and of the hall type, but in this Lübeck church the stone style of Belgium and France was reproduced as faithfully as could be done in brickwork. The towers are not very different from the Romanesque scheme, but the size and tracery of the windows show imitation of developed Gothic models in the simple brickwork. The construction was from 1270 to 1310, and the entire group of the churches of this type follow during the course of the fourteenth century.

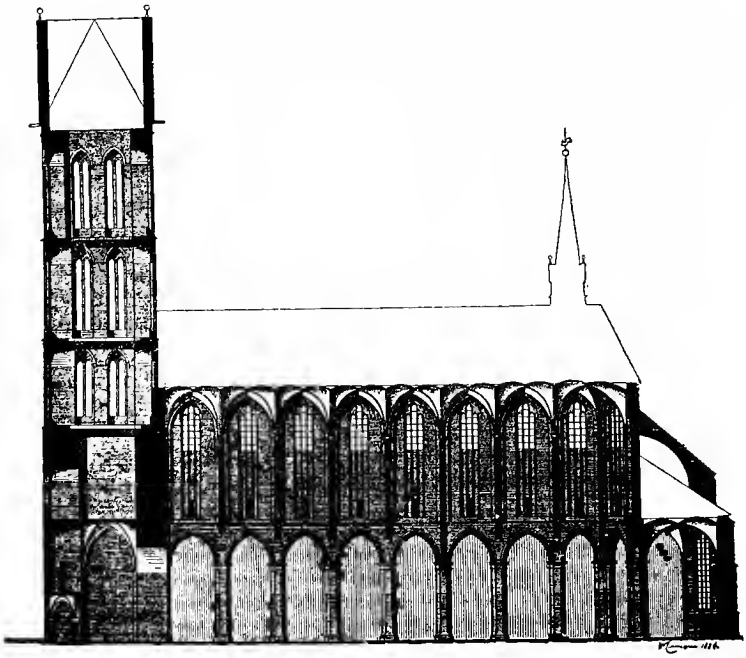


421—The Marienkirche at Lübeck. (From Dehio.)

The plan of the Cistercian abbey church of Doberan, built shortly after 1300, is a typical one, but this church varies from the rest in its characteristically Cistercian aversion to the flying buttress. The sec-

tion of St. Mary's at Wismar, given in Fig. 422, shows symmetrical proportions and the same type as St. Mary's at Lübeck, with a slight advance.

The most colossal of the Prussian churches, which also belong to this class, is the Marienkirche at Danzig. It was begun in 1403 and is an extreme example of flamboyant brickwork in its interior. We



422—The Marienkirche at Wismar. (From Dehio.)

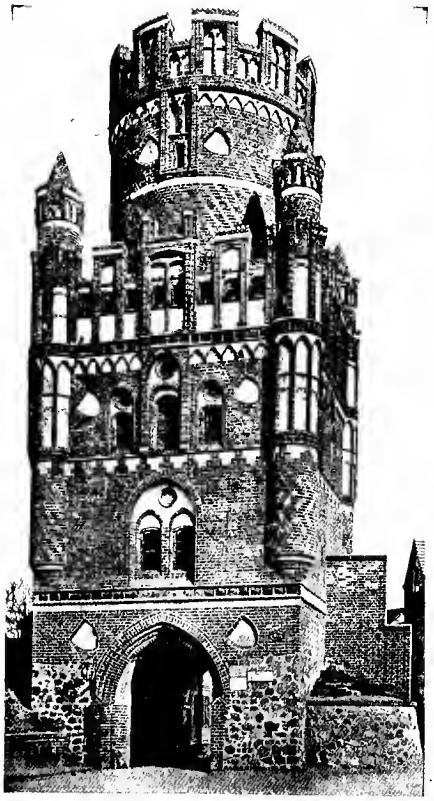
see here, in contrast to the type just studied, the typical hall effect, the raising of the edges of the octagonal piers between the faces, the occasional use, in the heavier piers, of channels and infinitesimal shaftings. In the effort to give elaboration to the panelling of the vaults the ribbing in the awkward brickwork has very much the effect of Moorish stalactites. It appears to have been the Franciscan monks who introduced the hall type into the north. It can be studied at Neu-Brandenburg (Marienkirche), Frankfort, and especially well in St. Mary's at Prenzlau; all built mainly during the fourteenth century and leading up to the Danzig type and to that of the cathedral of Stendal (1429). One can judge by Fig. 423 of the general scheme of these interiors. This interior of St. Catharine at Brandenburg dates from about 1470.

The details of the brickwork decorations, in so far as there was any, can be studied in connection with the works of civil architecture that will now be described.

Civil Architecture.—In civil and semi-military Gothic architecture Germany makes up for numerical scarcity in some branches by the extraordinary value of certain great works: the Marienburg in Prussia; the Albrechtsburg at Meissen, the City Hall at Braunschweig, the castles of Karlstein and Vayda-Hunyad, show great originality and are a distinct contribution to architectural history. They all belong to middle and late Gothic. If Germany is far inferior to the Lower

423—St. Catharine, Brandenburg. (From Gurlitt.)

Countries and to Italy in the number of her town halls and palatial residences, she has by far the largest number and most artistic array of monumental city gates which, in fact, assume as important a place in the North German city as the Memorial arches did in Roman cities. We will begin, then, with this characteristic group. It was, naturally, centered in the cities that were free and independent municipalities, such as those that formed the Hanseatic League, and as these cities were largely in the region of brick architecture, the evolution of the monumental gateway was largely circumscribed by this material.

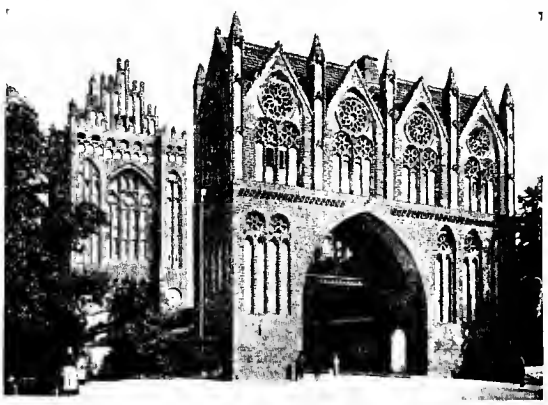


424—The Ueglinger Thor Gate, Stendal. (From Gurlitt.)

How it could be varied when built in stone can be seen by a reference to the bridge gateway at Prague in Fig. 416, which was built by a German architect.

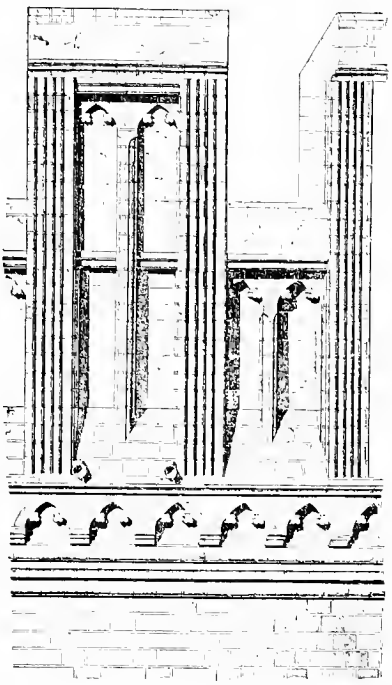
The great variety of design in these gates can be reduced to three main types: that with an entrance flanked by two towers, usually semi-circular, after the model of the Roman city gates; that with a single central tower, circular or polygonal, rising from a solid square or quadrangular base with the portal in the middle; that in the form of a façade, not fortified like the others, but reproducing the features of a house, arcade, etc.

Of these types the most frequent and original is that with the central tower, and among these the Uenglinger Thor at Stendal (Fig. 424) is generally regarded as the most artistically perfect. In it we see all but one of the various modes in which the brick-builders of the Mark sought to overcome the monotony of their material; use of white plastered grounds; of polychromatic patterns; of moulded details. We miss only the stamped geometrical patterns. In the Treptower Thor at Neu-Brandenburg, which is an example of the screen gate, we see the stamped patterns and tracery used in a design that is patterned on a church clearstory (Fig. 425), and



425—Neu-Brandenburg, Treptower Thor. (From Joseph.)

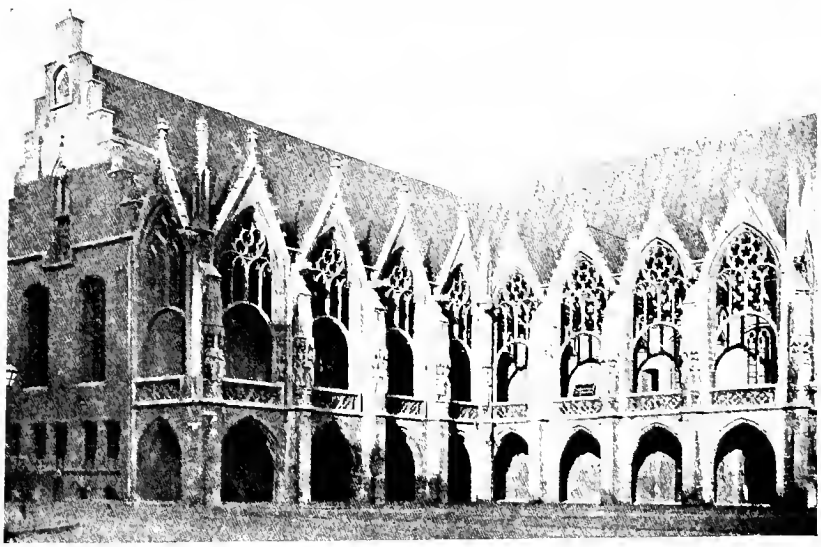
it is easy to see how what this type of gate lost in massive impressiveness it could gain in delicacy. The decorated battlements of some of these gates are illustrated in Fig. 426, from the Steinthor at Brandenburg, which shows design by polychromy.



426—Brick and terracotta battlements of tower of the Steinthor at Brandenburg. (From Essenwein.)

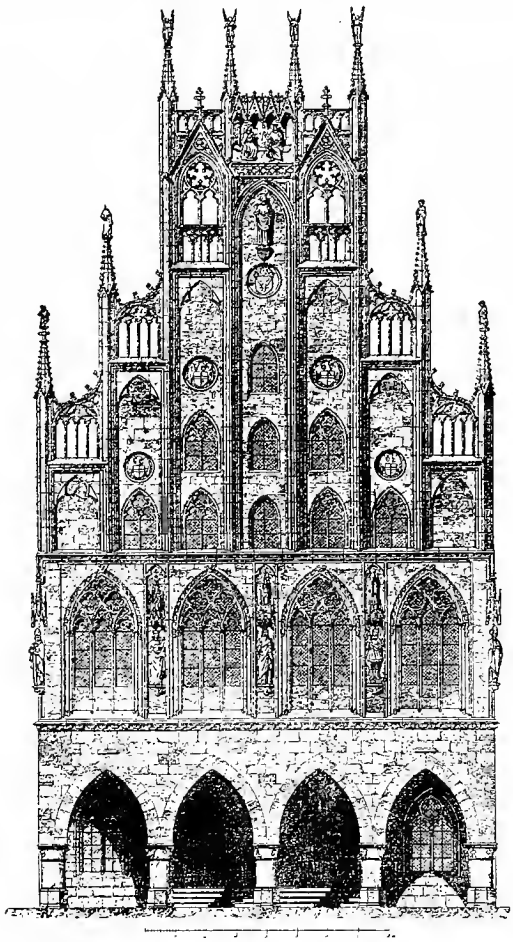
Of the Town Halls, four may be taken as fairly representative of different types: those at Braunschweig, Breslau, Münster and Tangermünde.

The city of Brunswick (Braunschweig) celebrated in 1393 its accession to the Hanseatic League by the building of the most delicate and charming of German Town Halls in the Marktplatz. It consists of two wings (Fig. 427) forming an angle of the square, and the two ends, facing on the streets, have the common stepped gable. The characteristic part of the design is the projecting open two-storied portico with its eight bays, fronting along the square,



427—Braunschweig, Rathaus. (From Joseph.)

crowned by dormer-gables at right angles to the steep roof that covers the main structure. The love of the local school for geometrical surface decoration is here transferred to a similar elaboration of tracery in which flamboyant forms invade the geometrical system. The resting of the window-like tracery upon so slender a round arch



428—Town Hall (Rathaus) at Münster. (From Essenwein.)

as only support is characteristic of the love of the German stone cutters of the fifteenth century for the *tour-de-force*, so evident in their spires. The absence of a belfry and the long low proportions are very unusual. The grouping of statues under canopies on brackets against the buttress piers reminds one of the similar arrangement in Belgian Town Halls.

It is curious to compare with this Brunswick gem the more normal Town Hall at Münster, in Westphalia, also a fine example of decorative stone work (Fig. 428). The same lower pointed arcade in four bays has cylindrical shafts in place of piers; the second story has more normal tracery, also with statuary. But this design, framed by a bold hood cornice, is now crowned by the stepped gable which at

429—Rathaus at Breslau. (From photo.)

Brunswick, of course, surmounts not the gallery but the short ends. This gable is made one of the most highly decorated in Germany by the pinnacled buttress piers with reverse-curve flying buttresses of flamboyant design, and by the elaborate crowning group. It is a work of the close of the fourteenth century, evidently not completed until the fifteenth century, when flamboyant forms had been adopted.

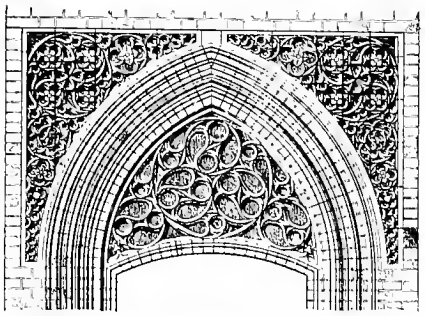
The main hall occupied the second floor and was divided by a line of wooden piers into two aisles, with a flat ceiling. In regard to the general lines of the design they are practically identical with those of the normal German burgher's house, merely enlarged and enriched.

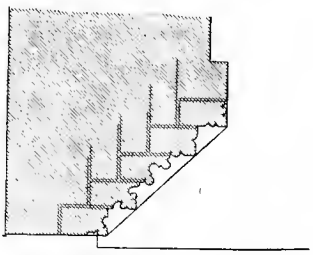
430—Town Hall at Tangermünde. (From photo.)

Here, too, the lack of a belfry emphasized the fact that these German town halls were even more for business purposes, as business exchanges, than for political and administrative life.

Quite another aspect appears in the Breslau Town Hall, of which

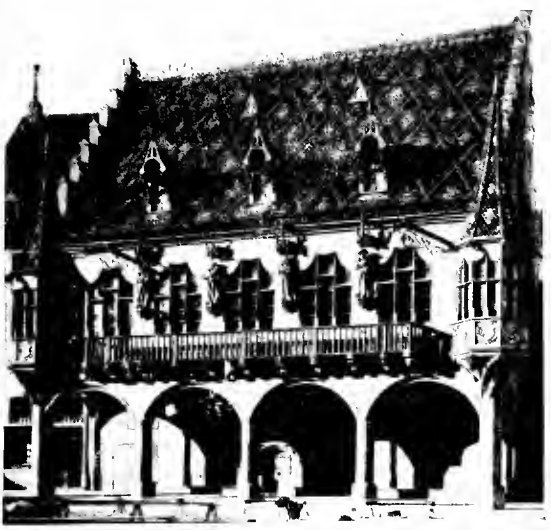
a general view is given in Fig. 429. It has its Belfry, restored at a later date, but the bulk of the building preserves its developed Gothic style. It is an imposing structure in the same class as those in Belgium and represents a powerful independent municipality. Other halls of this type are at Lübeck, Aachen, etc.





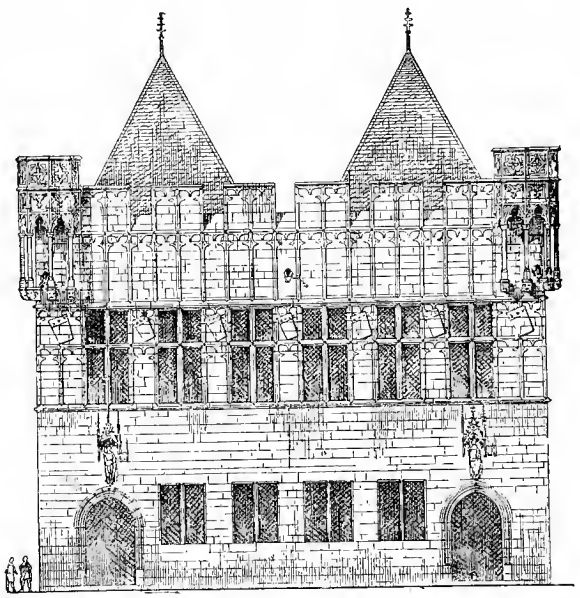
431—Terracotta decoration of Rathaus, Brandenburg. (From Essenwein.)

Finally, representative of the best style of brick architecture is the Town Hall at Tangermünde (Fig. 430), well suited to a small commercial city. The main hall is reached from an outside stairway with which the small belfry is connected. The scheme of the façade is the modification of a church rather than a house façade. The terracotta tracery and surface decoration of its gables marks the apogee of this class of work in the North. It is exactly in the style of that in the closed porch of St. Catharine at Brandenburg. Its frankly-stated independence of the structural lines is an unusually clear proclamation of a purely decorative purpose in the design. Its date is about 1460. Before leaving the subject of North-German terracotta work a type must be noted which is shown in Fig. 431 from a doorway of the Town Hall of Brandenburg. It has elaborate panel ornament in sharp relief and the imitation of stone tracery.



432—Freiburg-im-Breisgau, Kaufhaus. (From Hartel.)

Very close to the Town Halls were the merchants' exchanges, such as the Kaufhaus at Freiburg-im-Breisgau in Fig. 432, a flamboyant *bijou* if the balcony were in harmony with the rest of the design. The tiling in patterns is a feature quite commonly developed, especially in South Germany, as a means of making the steep roof play its part. An interesting feature of the corner oriel windows is the emerging network of ribs that form the brackets. A far larger Kaufhaus is at Mainz, but it is in poor condition. That at Cologne, called Gürzenich, had a main hall nearly two hundred feet long with a central line of

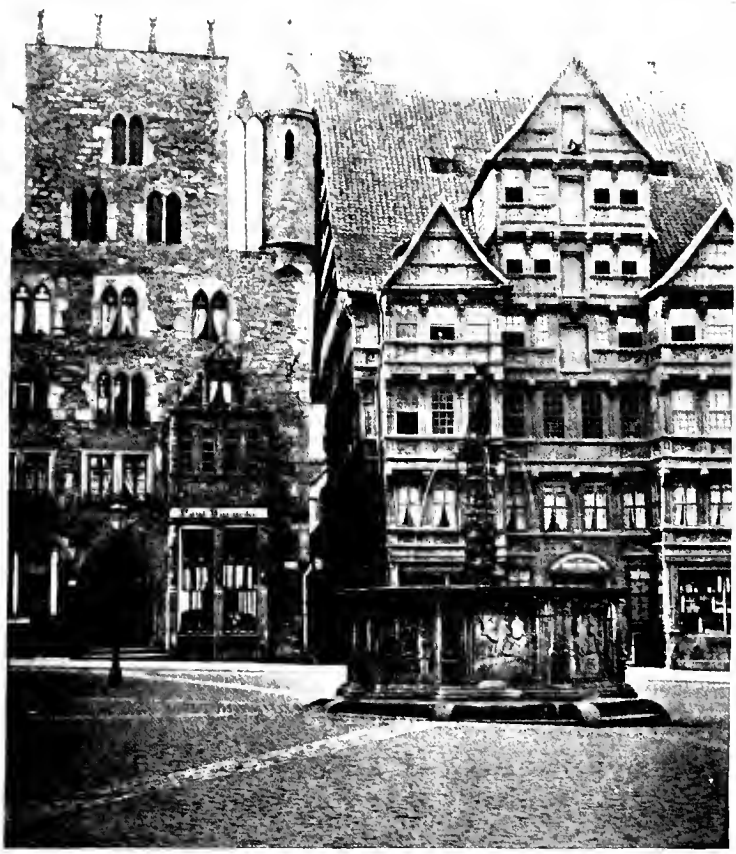


433—Merchants' Exchange (Gürzenich), at Cologne. (From Essenwein.)

columns dividing its width of ninety feet. It is well worth studying, notwithstanding its simplicity (Fig. 433), both on account of its purity of style and because it stands so close to the private architecture of the city in the fifteenth century. It is in strong contrast to all the Town Hall architecture we have been studying and, as was usual in Cologne, approximates more closely to international types.

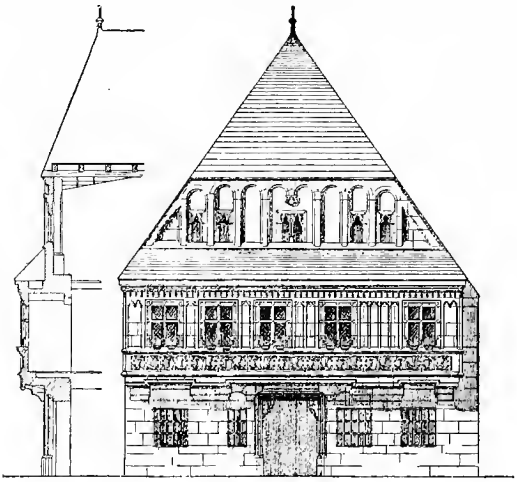
As would be expected, there are three classes of private houses in Germany, in so far as style is dependent on materials: the stone house, the timbered house, and the brick house. The last class is more fully represented in Germany than anywhere in Europe, except Northern

Italy. Another mode of classification is by type of façade: square-topped, plain gabled and stepped gabled. In Fig. 434 a square-topped stone house is set beside a typical timbered Hildesheim house. The majority of stone houses are exceedingly plain until the close of the Gothic age, when there is considerable elaboration, especially in effects of balconies and oriel windows. A stone house at Steyr (Fig. 435)



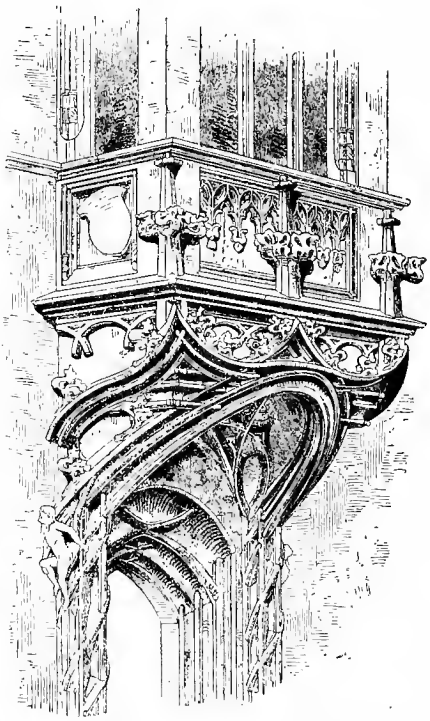
434—Stone and frame houses at Hildesheim. (From photo.)

illustrates the plain-gabled façade and a simple balcony scheme. A far richer scheme was expressed, a little later, in the famous house at Innsbruck, where polychromy is combined with tracery and relief work (Fig. 436). Quite a fantastic flamboyant balcony design appears in a house at Freiburg, in Fig. 437. In the matter of oriel windows nothing is more charming than that of the parish house of St. Sebald



435—House at Steyr. (From Essenwein.)

436—House at Innsbruck. (From photo.)

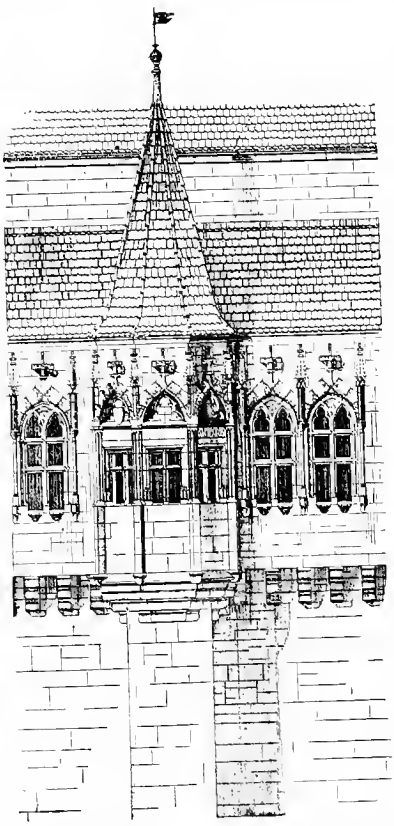


437—Balcony of house at Freiburg-im-Breisgau. (From Essenwein.)

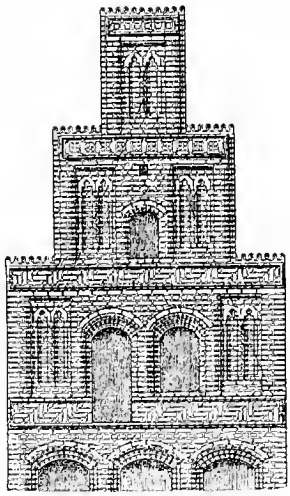
at Nuremberg (Fig. 438), which has a symmetrical use of relief sculpture almost unique in a work of civil architecture. It is interesting to compare this window with others of similar design but simpler detail at the Town Hall and at the Carolinum, both in Prague, and that of the castle of Vayda-Hunyad in Fig. 439.

In the brick houses the favorite form of façade was the stepped gable. A building at the Cistercian monastery of Zinna (Fig. 440), while not strictly a house, gives an idea of the richer com-

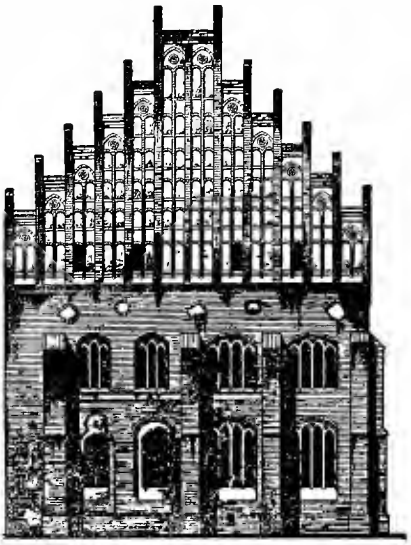
438—Window in parish-house of St. Sebald, Nuremberg. (From photo.)



439—Windows of gallery, main hall, Castle Vayda-Hunyad. (From Handbuch.)



Brick gable of house at Lüneburg. (From Essenwein.)



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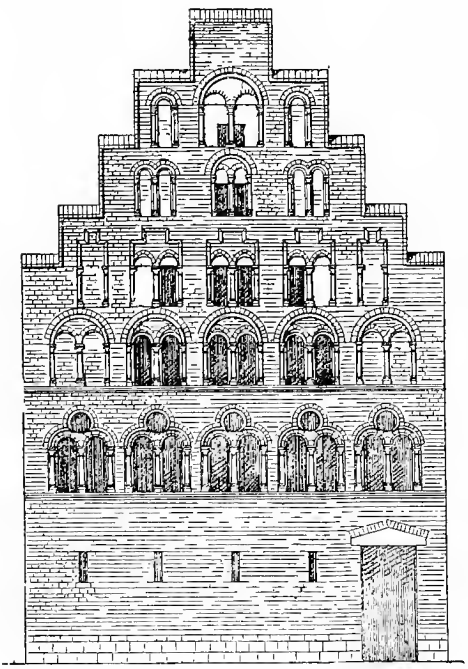
Building (brick) at Zinna monastery (From Essenwein.)



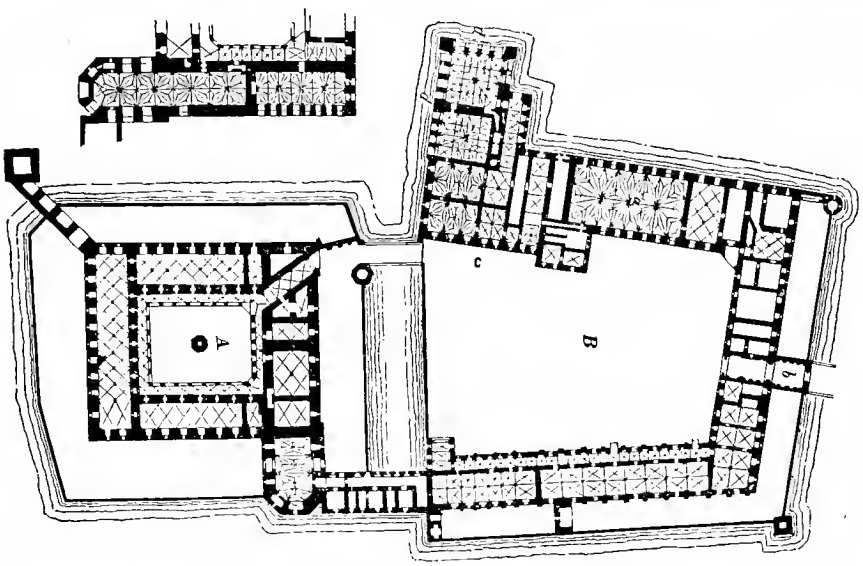
441—Overstolz House, Cologne. (From Essenwein.)

positions of this class, and even the simpler forms at Cologne (Fig. 441) and Lüneburg illustrate the general tendency of the class to utilize more than was done in the stone houses the element of decorative architectural membering.

Military Architecture.—The best known group of military constructions in Germany are, of course, the castles on the Rhine, but while picturesque they are architecturally unimportant, and it will be impossible here to do more than discuss a few typical works of far greater importance in various parts of Germany.

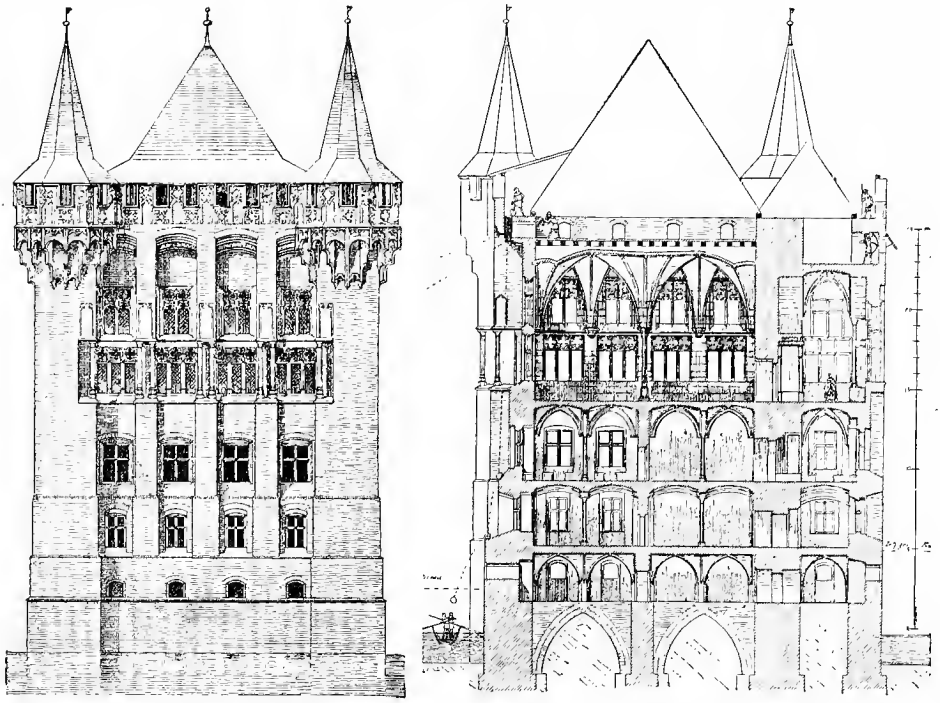
The Marienburg Castle is the cornerstone of the Prussian state

and culture, for it was the seat of the power of the Teutonic Knights who came from the Holy Land to this wild province of the northeast and by force of arms established the beginnings of law and order, founded cities and colonized the land as far as Poland and Russia. The restoration of this castle of the Knights a few years ago was a matter of national importance. No work of mixed military and civil art has such momentous historic associations. Artistically it is more important than any of the ecclesiastical buildings of the province. Its

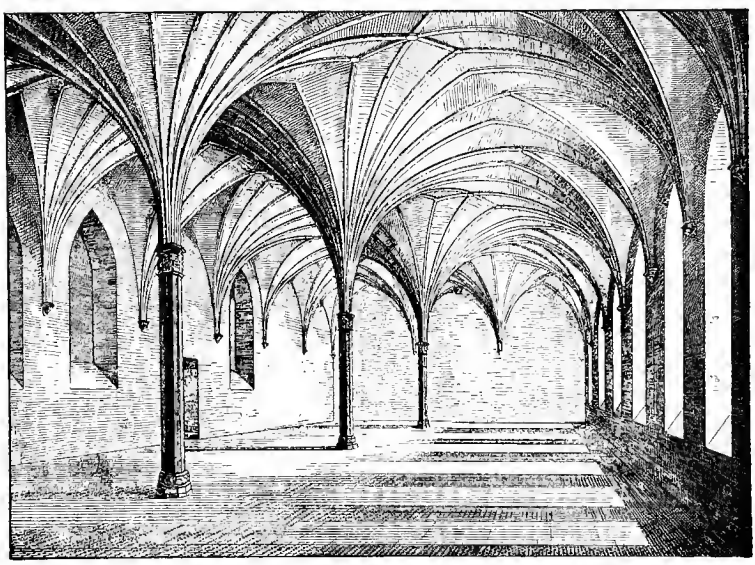


442—Plan of Schloss Marienburg. (From Adamy.)

extent can be judged from the ground plan in Fig. 442. It differs from a royal or a feudal castle, and is comparable, for example, to the Papal Palace at Avignon in its extent and variety, but excels it in every point. Perhaps the buildings of Mt. Saint Michel in France come as close as any in a comparison of the various halls. But its real analogy is to the great castles of the Knights of St. John and the Knights Templars in Syria, at Tortosa and the Krak, from which the Teutonic Knights derived their scheme. Work on it was begun in 1280, and it consisted of three parts. A lower castle was connected with the town which it dominated; this is nearly destroyed. It is the middle and upper castle that remain in part a work of the late fourteenth century. At C on the plan (upper side) is the most sumptuous

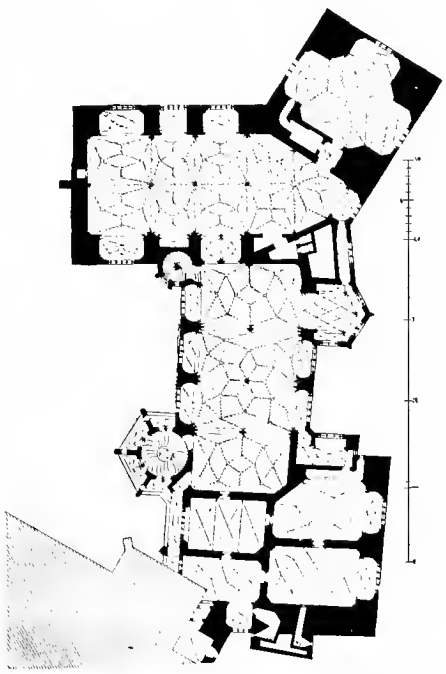


443—Grand Master's House at Schloss Marienburg. (From Essenwein.)



444—Refectory at Schloss Marienburg. (From Handbuch.)

group of buildings, especially the Grand Master's house, of which an elevation and section are given in Fig. 443, across the west end. Its four stories are all vaulted, the large upper hall with an interesting fan-vaulting centering on a single slender shaft. How daring and splendidly constructed was the entire vaulting system may be judged by the view of the two-aisled Refectory of the Knights in Fig. 444, in the centre of the west wing (A on plan). It is regarded as the boldest

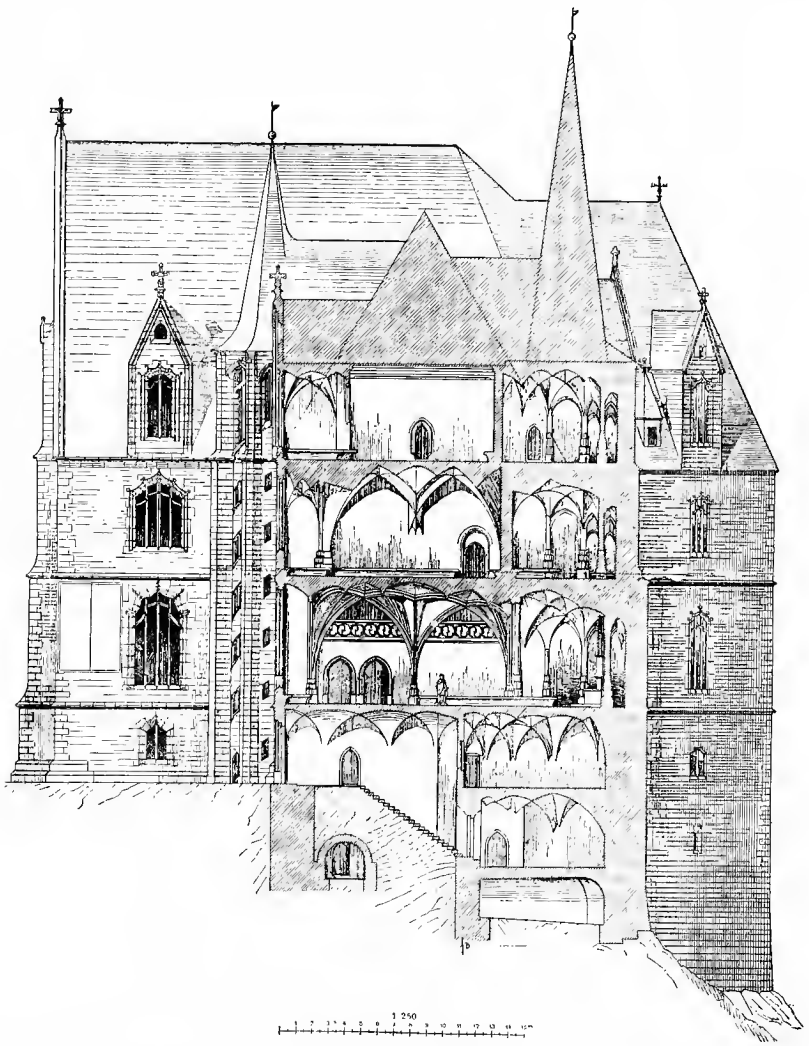


445—Plan of the Albrechtsburg at Meissen. (From Essenwein.)

among the vaulted halls of Germany and its fan-vaulting is of the type that prevailed in the later portions of the castle—probably an importation from England.

The Albrechtsburg at Meissen takes up in the Flamboyant age the architectural mantle where it was dropped at the Marienburg. It was begun in 1471 by the architect Arnold of Westphalia and carried out with unity and originality. The plan (Fig. 445) shows the greatest picturesque richness in arrangement and vaulting. On the second or main floor not a single room is ceiled—all have as elaborate vaultings

as church aisles or chapels, and the vaulting cells show the greatest variety. Such French buildings as even the house of Jacques Cœur are simple in comparison. A section in Fig. 446 shows how this

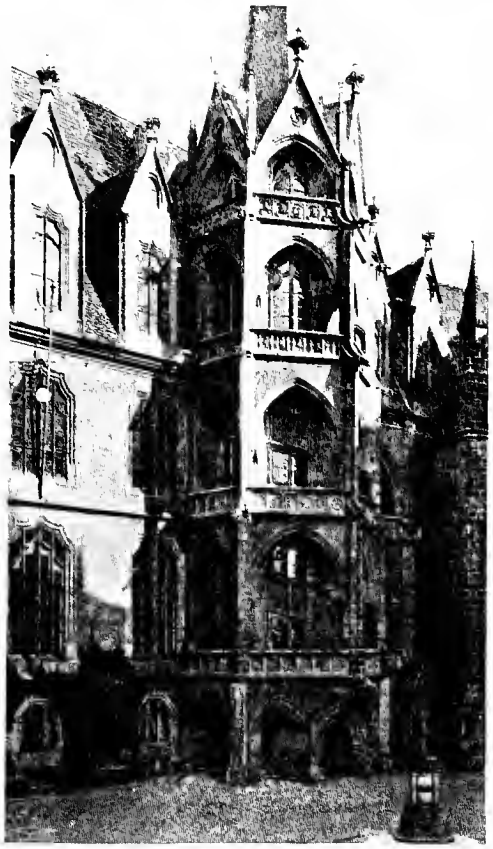


446—The Albrechtsburg at Meissen, section. (From Essenwein.)

variety was secured. It is far more massive than the Marienburg, and in that much its architect shows less science. His use, however, of internal buttresses is ingenious. The breadth and variety of the

fenestrage and other features of the exterior can be appreciated in the details of Fig. 447.

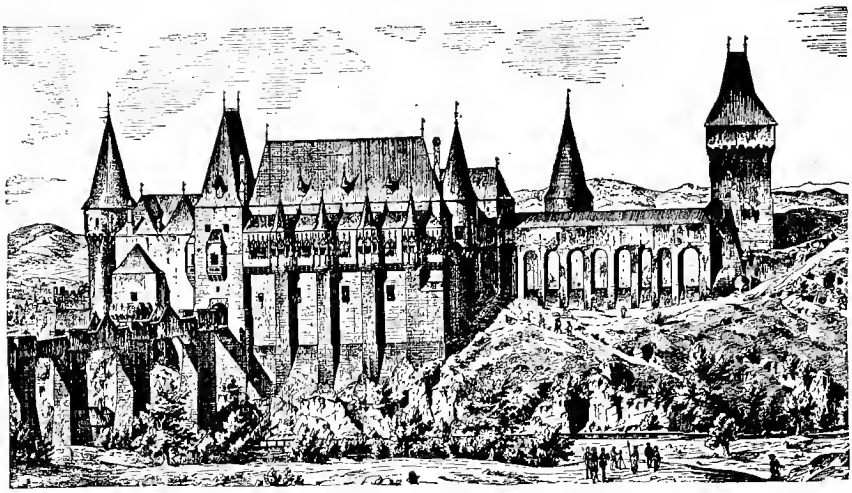
The pearl of Hungarian castles is Vayda Hunyad. Its situation is picturesque (Fig. 448), approached by a long and high bridge. Architecturally it has only one important feature: the great central



447—The Albrechtsburg at Meissen. (From Hartung.)

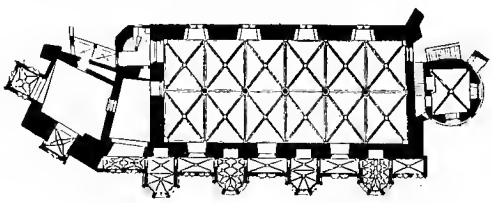
hall (Fig. 449), with its unusual covered balcony varied at intervals by four oriel windows. This charming design as given in Fig. 439 shows the style of about 1400. The rest of the constructions, including the square keep on the right, are built in an irregular ovoid around a court. The castle became quite out of repair.

More extensive is the Bohemian masterpiece, the Castle of Karlstein, built by King Charles IV (1348–57), to whose short reign Bohemia owed such a remarkable revival in architecture. It was not



448—Castle Vayda Hunyad. (From Handbuch.)

strictly a fortress, nor strictly a royal chateau, but rather a realized castle of the Holy Grail, a shrine, full of precious and sacred things. Its chapels were frescoed by the best artists and filled with relics and the insignia of royalty and of the Holy Roman Empire. Unfortunately it has been so ruined by hideous changes that no reproduction of its present condition can give any idea of its original beauty.



449—Main hall of Castle Vayda Hunyad. (From Handbuch.)

CHAPTER II

GOTHIC IN THE NETHERLANDS

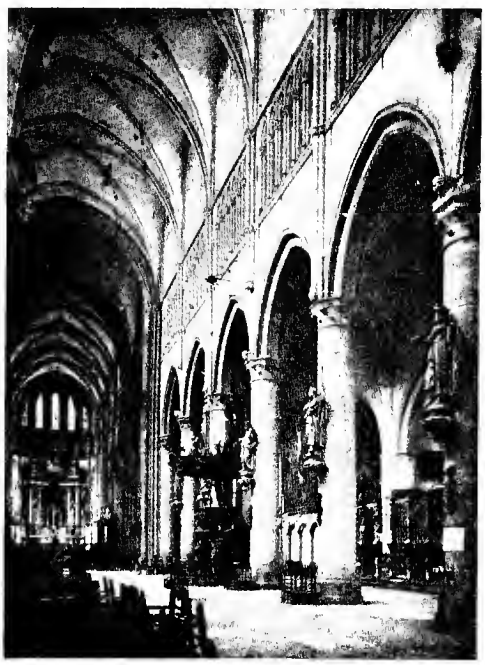
BELGIUM.—French and German features are present in the Lower Countries in very different percentages. The Rhenish influence was so strong in the Romanesque age that the typical cathedral of Tournai could well be described in Vol. II, p. 411, among German monuments. The view of the exterior there given in Figs. 361 and 362 shows a Romanesque nave, transitional transept with Rhenish semicircular end, and then the rebuilt Gothic choir with its greater height. In the transept and nave there are not only Rhenish and Norman features but an evident connection with Noyon and Soissons, suggesting an interesting relationship. The choir is purely French, of the fourteenth century, with the gabled windows made fashionable by the school of Troyes after 1250, and with an internal gallery at the base of the clearstory.

There is, naturally, not much that corresponds to the stage of French work previous to c. 1200 of the Sens-Senlis-Noyon-Laon types. But one feature of this style, the use of columnar supports instead of piers, not only became acclimated but remained the favorite form throughout the Netherlands even as late as the fourteenth century—a unique peculiarity in Europe. Another feature in which an archaistic tendency was at first shown is the use of two aisle bays for every nave bay—a Germanic Romanesque survival. The seven naves of Antwerp cathedral set it apart. The lack of interest usually felt in the Gothic work of this region may be ascribed to monotony and baldness, both outside and within.

There is not the Cistercian element that is found in Germany because it was not Burgundy and the west, but the north of France that came into contact with the Netherlands, and such Cistercian churches as Villers and Orval were not particularly typical. The

Belgian cities, where the Gothic of the thirteenth century can best be studied, are Tournai, Brussels, Ypres, and Bruges. The German influence was dominant at Tournai, where there are four Gothic churches of this type: only in the exquisite choir of the cathedral is the pure and developed French style followed. At Gand the church of St. Nicolas is a good example of the large class of pseudo-Gothic buildings in the Netherlands which retained the wooden roof without vaults.

The cathedral Ste. Gudule of Brussels belongs to three centuries. Its choir was begun in 1220 and it was not completed until the close of the fifteenth century. The façade is an imposing design of the fourteenth century, essentially French, but with some Germanicisms, especially in the gable, due to the fact that the design was not completely carried out until the following century, though there is no sign of the decorative richness of that time. At the church of Notre Dame the choir and transept belong to the same age, c. 1220.



450— Nave of St. Martin, Ypres. (From Michel.)

An unspoiled example of the same combination of early and middle styles is the interior of St. Martin at Ypres, in Fig. 450. Begun at the choir in 1221 in a manner that was followed in the transept, with its charming rose-windows, later in the century, and then in the nave, where the slenderness of the columns, the prismatic groups of triforium shafts and the broad clearstory show the variations in the original scheme introduced in the fourteenth century. It is at Bruges that churches of the thirteenth century (N. Dame and St. Sauveur) can be found with clustered piers of the normal French type, in contrast to the above more commonly used columnar interior.

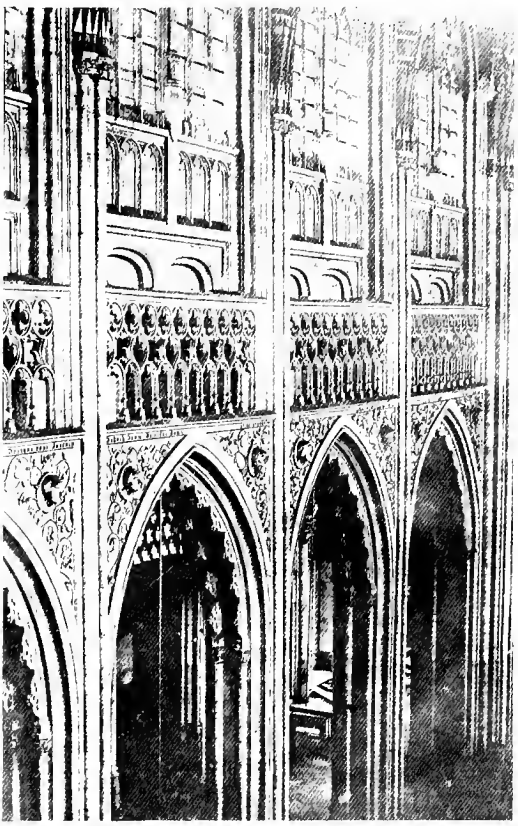
Still it was not long before this that the columnar supports appear at Mecheln (or Malines) in Brabant, where the six bays of the three-aisled basilical cathedral, begun in 1341, are separated by cylindrical shafts and its French origin is certified by the polygonal choir with seven radiating chapels. Its archaicism is also shown in the lowness of the vaulting (27 met.); still as the nave is only 12 m. wide, the interior is well proportioned and light, with typical narrow arcades in the triforium and slender colonnettes. It has one of the finest of the lofty west towers (120 met.), which characterize Belgian churches of the fourteenth and fifteenth centuries.

A second important cathedral in Brabant, built in the fourteenth century, is St. Peter at Louvain, begun after a fire in 1373, but long in course of construction. It is a three-aisled church of good simple lines, but crude in detail and execution. This and the similar church of S. Waudru at Mons are typical of the moderate Flamboyant with clustered piers and trilobated or quatrefoiled triforium arcades. The original drawing for the tower of S. Waudru is among the largest and most elaborate that remain to us.

451—Cathedral of Antwerp. (From Joseph.)

The cathedral of Antwerp has the same design as at Brussels in the façade (Fig. 451), including the enormous corner buttresses, but with an enrichment of surface decoration which indicates a slightly later date, and with

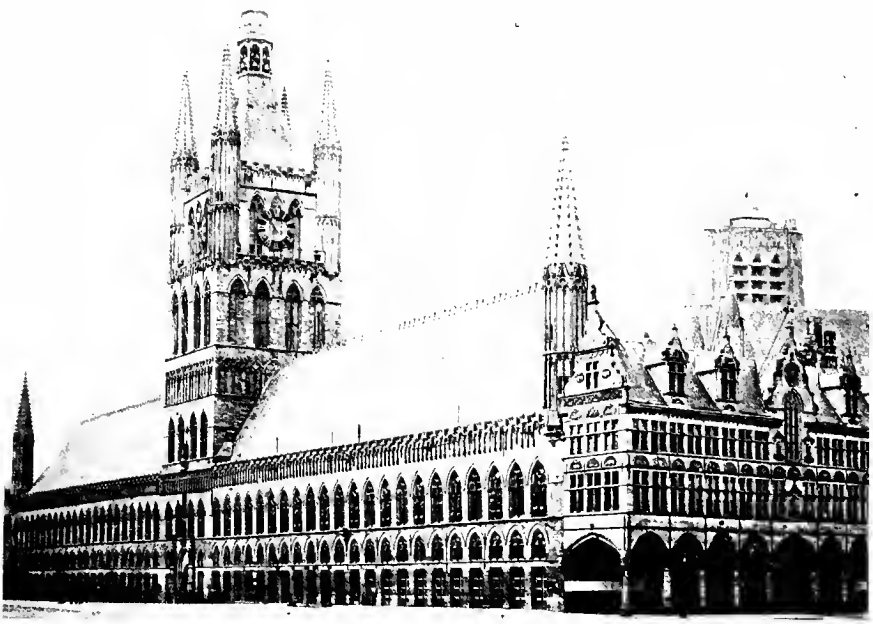
an increase in the comparative width of the towers due to the extraordinary seven-aisled plan. The disproportionate narrowness of the central section, which had made the façade of Cologne with its five aisles inferior to that of Strassburg and the French cathedrals, is here emphasized because Antwerp is the only European cathedral with as many as seven aisles, making it the largest church in the lower countries. It was begun in 1352 as a five-aisled basilica. The choir is of the fourteenth, the nave of the early fifteenth century. In 1422 the façade was begun and in 1425 the two outer aisles, of greater width than the first four, were added. The southern tower was left as it stands in 1474, while the north tower was completed in 1518 with a height of 123 metres, as compared to the 157 metres of Strassburg. It is easy to see why the spire is the least successful part of the tower when we know that the original scheme called for a much higher and aspiring design. When the interior was executed the geometric poverty of detail had become the rule, and the lack of capitals accentuates the dryness of this vast but uninteresting composition. The column is abandoned for the clustered pier, as became usual on the approach of the Flamboyant period.



452—St. Jacques at Liège. (From Ysendyck.)

As an example of the richest type of Flamboyant Gothic touched in certain details by the hand of the Renaissance invasion, nothing in Europe is perhaps more charming and original than the interior of St. Jacques at Liège, built between 1513 and 1538. There is nothing

to compare with it in France or Germany. Fig. 452, while excellent in its reproduction of the bays, fails to include the extraordinary vaulting with its pendent keystones and elaborately panelled surfaces. Also on account of its perspective it does not convey the extreme breadth of the arcades which made it necessary to allow two triple windows to each bay. The treatment of the two parallel lines of delicate stone lace-work on the intrados of the arches, rising from colonnettes, and of the parallel pair of vaulting shafts is peculiar to work shading into the Renaissance, and the scroll work in the span-



453—Merchants' Exchange, Ypres. (From photo.)

drels, encircling medallion heads, is frankly Renaissance. In general, the Flamboyant style made less fundamental changes in the Netherlands than elsewhere, leaving the exteriors rather denuded and the interiors monotonous. Among the peculiarities is the infrequency of the flying buttress and the poverty of good sculpture.

Civil.—The civil architecture of Belgium is unquestionably the richest in Europe during the Gothic age, and for modern architects and decorators it surpasses even that of England in suggestiveness, partly because it shows greater variety and elasticity of design. The

unparalleled wealth of the Flemish cities and their commercial spirit made this dominance quite natural: one forgets the imperfections of their religious buildings in admiration for their merchant's halls.

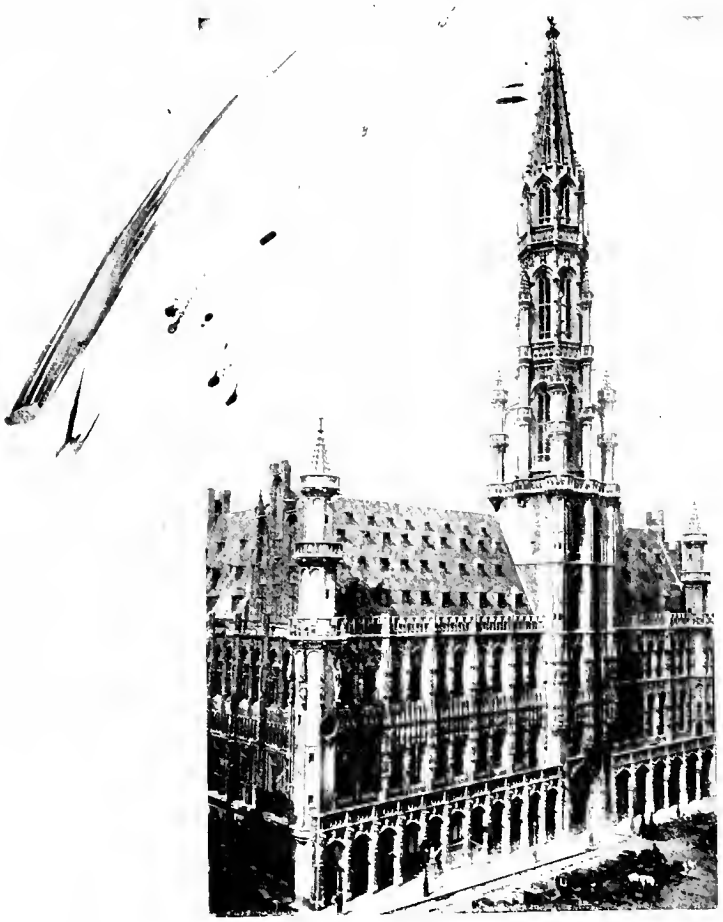
The Halle aux Draps or Cloth Hall at Ypres, built between 1200 and 1304, is the largest and most splendid civil Gothic structure in Europe. Its main front (given in Fig. 453) is more than 450 feet

454—Town Hall, Bruges. (From photo.)

(133 m.) long, with 44 bays of interesting and original design: windows like open tympana above architraved doors. In the tracery of its upper story it approximates the closest to church architecture, and its splendid central tower or belfry with corner turrets and battlements—as well as the turrets and battlements on the body of the building—are reminiscent of Anglo-Norman design. The building which masks

the end (the Conciergerie) is a much later Gothic structure, showing the approach of the Renaissance, and gives an instructive contrast. The opposite end is not masked but is of the same design as the front.

Even simpler is the Hall at Bruges (Fig. 454), in which the belfry is about 300 feet high (107.50 m.). It is easy to see that the upper part of the octagon of the belfry is much later. The details of the



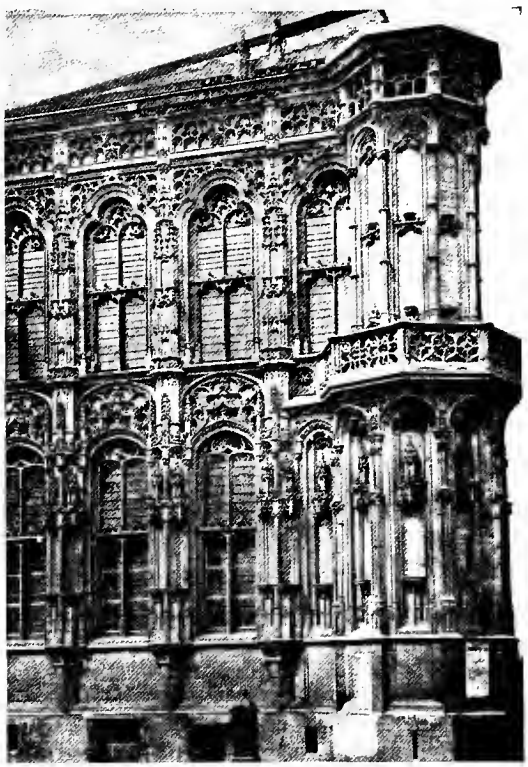
455—Town Hall, Brussels. (From photo.)

design are not happy, especially the closeness of the third story to the hood arches of the second story and the awkward triple division of these second story windows.

For the middle period, marking the beginning of rich surface decoration and groups of statuary under canopies between the windows, the most spectacular building is the Town Hall of Brussels

(Fig. 455), built between 1401 and 1455. It has the most successful delicate central belfry in the country, with two receding octagonal stories crowned by a stone spire—the whole being full of spring. There is an interesting grouping of slender balconied turrets in two stories at the eight angles connected by flying buttresses with the central octagon.

To represent the later stage of Flamboyant Gothic nothing is more artistic than the Town Hall of Ghent, built between 1518 and

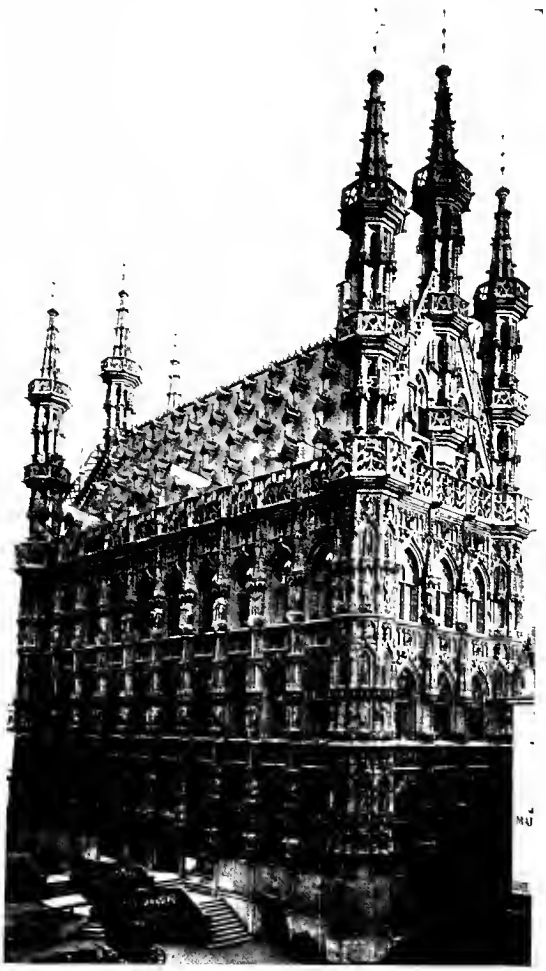


456—Hotel de Ville, Ghent. (From Ysendyck.)

1535. The illustration of the left angle, in Fig. 456, was taken before it was disfigured by modern statues of obtrusive whiteness that have been set in the niches. It seems probable that the architect planned to finish the turret with a spire, though Renaissance influence may have induced him to forego it. It is interesting to compare with the corresponding angle at Middelbourg (see Fig. 462).

Slightly earlier in date (1448–1463), the Town Hall of Louvain is the apotheosis of overloaded ornament and rich monotony. It illus-

trates also the change in proportions from the low-lying horizontal stories of Ypres. The buttresses, with their statues and canopies, emphasize the dominant verticality of the Flamboyant age. The turrets, with balconies that seem borrowed from minarets, continue



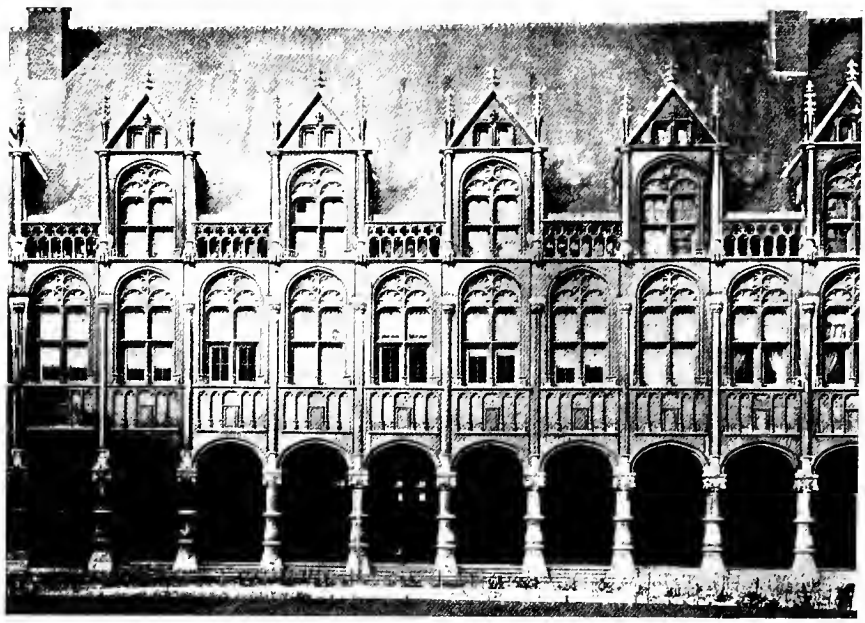
457—Hotel de Ville, Louvain. (From photo.)

the buttress scheme, with great contrast of light and shade, the most effective feature of an otherwise unquiet design (Fig. 457).

One of the most curious buildings of mixed design is the famous Bishop's Palace at Liège, built between 1508 and 1540. In Fig. 458 is part of one of the two inner courts of this elaborate and pretentious masterpiece, which has been much maligned as well as praised. The

shafts of the columns emerge from a classic base which is copied from Roman work and not from any Italian Renaissance original with which I am familiar. The architect must have been one of the Flemings who had travelled in Italy or had seen designs of antique remains. Otherwise there is little about the design that is not late Gothic.

The Flemish cities are full of medieval houses, especially of the late Gothic period. Within this class one must reckon the smaller



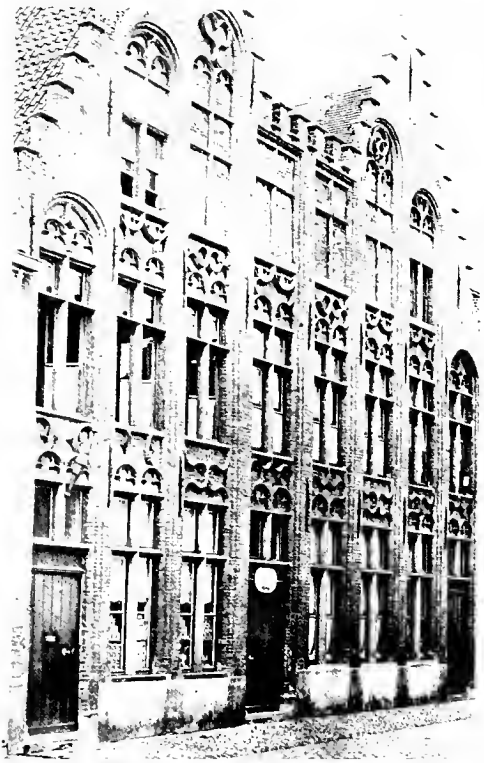
458—Court of the Bishop's Palace, Liège. (From Ysendyck.)

guild, society or association houses, which do not differ materially in their façades though they do in their interior arrangement.

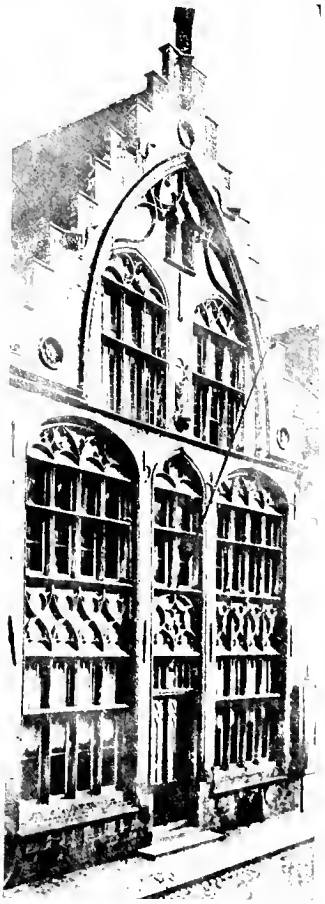
In some cases two or three houses were built as a unit, producing an effect of breadth that modern architects have imitated. In Fig. 459 a group of three houses in the Rue de Jerusalem at Bruges shows how excellent a design could be produced in the simplest kind of brick work. They date from about 1535. The keynote to this composition is, of course, the strong vertical rhythm of the moulded pilaster masses.

Another unusual design, also in brick, is that of a single house at Bruges, in Fig. 460, where the framing of the window groups is even more successful, especially in the gable. In both these cases

the style is Flamboyant, but the ornamentation is kept quiet and bold. When stone was the material the decorative tendency of the age was naturally given greater play. A late Gothic corporation house at Ghent is an example of the bastard style where a pseudo-Renaissance naturalism governs the surface decoration, crossed with the Flamboyant forms. The gable is modernized and was probably originally stepped. The design combines the extremes of glazing and of surface decoration.



450—Houses at Bruges. (From Ysendyck.)



460—House at Bruges. (From Ysendyck.)

HOLLAND.—Holland was far more backward than Belgium. In its northern half it was, in fact, substantially a part of northern Germany and received its Gothic from that direction more than from the South, from France *via* Belgium, whence its southern section derived inspiration. Such churches as that of Damme, although imitating French Gothic forms in round columnar supports and triple pointed windows,

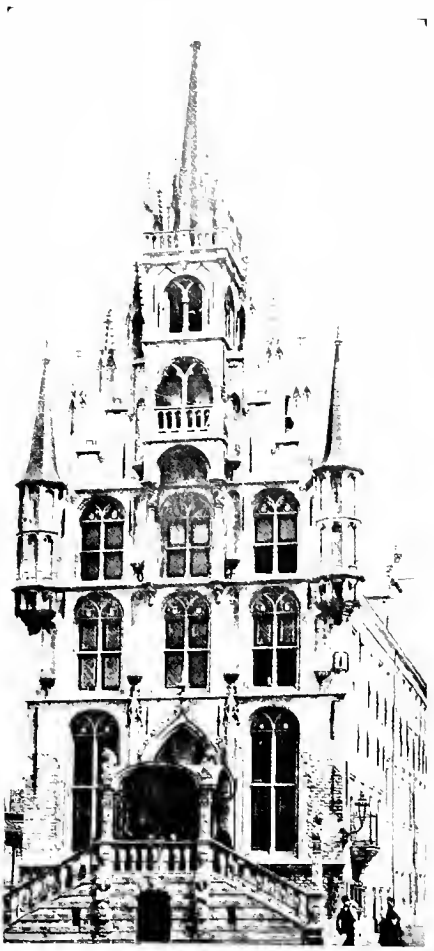
do not enter into the question, as they hold to wooden roofs in both nave and aisles. In the extreme south the cathedral of Utrecht (1254), where the choir only is preserved, and S. Servais at Mæstricht, show how French forms were adopted in this section before the close of the thirteenth century, while the Liebfrauenkirche at Roermonde proves that German transitional forms were also copied at the same time. In the north it is especially in Friesland that we meet with a type of hall-church that may be derived from the Angevin school of Southwest France, either directly or through German intermediaries. They consist of a single nave covered with domical groin vaulting, and are perfectly plain brick structures, in early Gothic style, whose prototype is the cathedral of Angers. They are hardly worth illustrating. The best examples are at Stedum, with Angevin apse, at Zuidbroek and Winschoten, with square apses, and at Termunden, near Antwerp.

The use of brick became almost universal in Holland and gives a very material connection with the neighboring North German schools on the east. This is all the stranger because stone was not lacking and had been freely used during the Romanesque age. This prevalence of brick stood in the way of the imitation of French and even of Flemish models. At the same time, here as in parts of Scandinavia, stone was used for certain details. The reluctance to adopt Gothic stone vaulting even when it is certain that its principles were clearly understood and when Gothic forms were otherwise adopted, is explained by the purely material difficulties of the insecure foundations that had to be contended with throughout the greater part of the country with its moist, shifting soil. There are many forms of these wooden coverings. At S. Jakob, The Hague, and in many other cases, the forms are an imitation of stone vaulting.

Aside from the really charming Church of Breda, with rich tracery and a triforium under the fine clearstory, due to Flemish models, the interiors are mostly without triforium, and not only extremely bare and simple, but lacking in unity of design. This could hardly be otherwise, given the use of brick and the reluctant use of stone vaulting. Still, in cases like Saint Bavon at Haarlem, the unities are well preserved through the imitation in wood of the stone vaulting. It is a work of the fifteenth century. Among late buildings the most artistic is the Cathedral of Bois-le-Duc, dating from 1419, which follows the French cathedral plan with radiating chapels and double

aisles. A little later (1456), S. Stephen at Nymwegen was completed in similar style.

The fifteenth century, in fact, is the golden age for Dutch Gothic, and among the most remarkable churches are S. Mary Magdalen at Goes, with three equal apses terminating the aisles, St. Lawrence at Alkmaar, the Niewe Kerk at Amsterdam, the Groote Kerk at Dordrecht, and the Groote Kerk at Leenwarden. The basilical plan was almost universal, with great width in proportion to its length and with a doubling of the aisles which usually did not extend the entire length of the building, but was confined either to the body of the church or to the choir. The elevation differed substantially in the northeast where, as we have seen, the hall type prevailed, usually with a single nave. In the south the Flemish-French type was the rule.

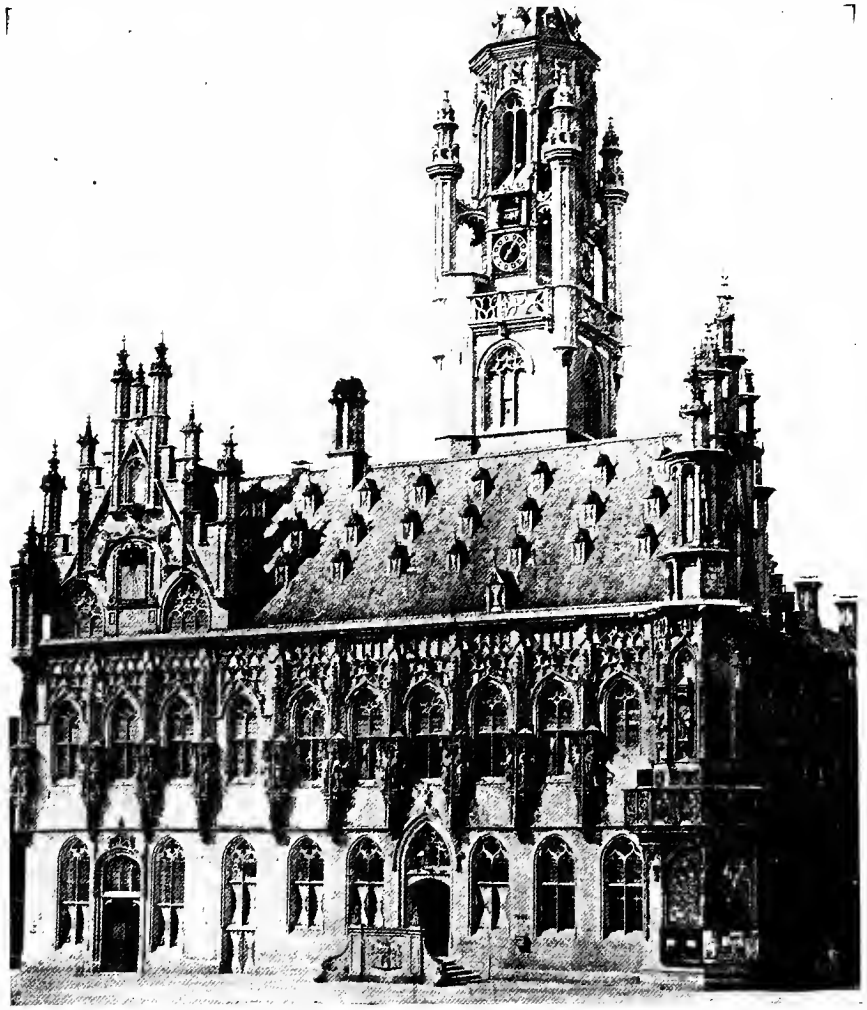


401—Hotel de Ville at Gouda. (From Ysendyck.)

The two most interesting town halls in Holland, those of Middelbourg and Gouda, are both of the latest Gothic age (fifteenth century), and belong to very different types. That of Gouda (Fig. 461), is not large, but standing quite isolated in the centre of the marketplace, with its belfry adjusted to the façade in so original a manner by the stepped-gable façade with its pinnacles, it is felicitous in its simplicity. The effect is even heightened by the barocque perron with its curious low roof.

At Middelbourg we notice a similar infusion of Germanicisms, for instance, in the stepped and pinnacled gable (Fig. 462). The belfry, curiously enough, is not an integral part of the structure, which is

built around a court in the centre of which the belfry rises. It is an original way of combining two municipal structures—town hall and belfry—that were at times distinct. In the design of the angle, with its large turret and its balcony for public proclamations and speeches,



462—Hotel de Ville at Middelbourg. (From Ysendyck.)

as well as in the wealth of statuary under canopies, there is the greatest similarity to the Town Hall at Ghent. The Middelbourg building is the earlier, begun in 1468, and completed by the architect Keldermann after 1507.

CHAPTER III

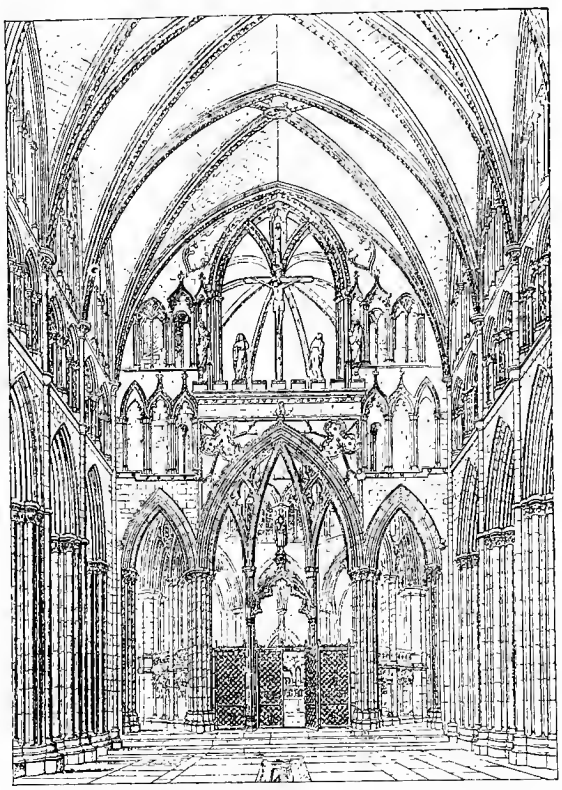
GOTHIC IN OTHER NORTHERN COUNTRIES

SCANDINAVIA.—The Gothic situation in Scandinavia is unusually complicated, and at the same time lacking in vital interest. Owing to the absence of a strong national style in stone during the Romanesque era, there was no local nucleus with which the imported forms could be amalgamated. The prevailing native wooden architecture had no influence on Gothic forms. Geographically disconnected from Europe except by way of the architecturally backward sections of North Germany, which acted through the medium of Denmark, the three countries of Norway, Sweden and Denmark would naturally receive their Gothic largely by means of their commercial connections, especially by sea. So we find the sources of Scandinavian Gothic to have been first England and then Germany. France was a minor factor. Even the customary Cistercian invasion, in so far as it brought Gothic, seems to have come not from France but England: for example, at Hovedo, founded from Kirkstall, and Luisce, founded from Fountains, both of them in Norway. It was not until 1287 that France took its part in a brilliant and exceptional way by sending architects from Paris—Etienne de Bonneval and his assistants—to build the cathedral of Upsala. Under these circumstances it is hardly surprising that Scandinavian Gothic proves to be a hybrid product without much creative energy.

Norway lay most open to the English influence from over-seas, and was the first to adopt Gothic forms. Yet she not only preserved better than the rest of Scandinavia the primitive wooden architecture through the Gothic age but extended it to Sweden and even Denmark.

In connection with this use of wood it should be noted that the relative scarcity of good local building stone was one of the main causes for the Scandinavian architectural situation. Only a hard

granite was common. Limestone was hardly to be found outside of certain limited sections of Denmark and Sweden. This led to the introduction from Germany and the Netherlands of the technique of brick building, which had not been in use during pre-Gothic times. Still, there was not that frank and complete surrender to brick and

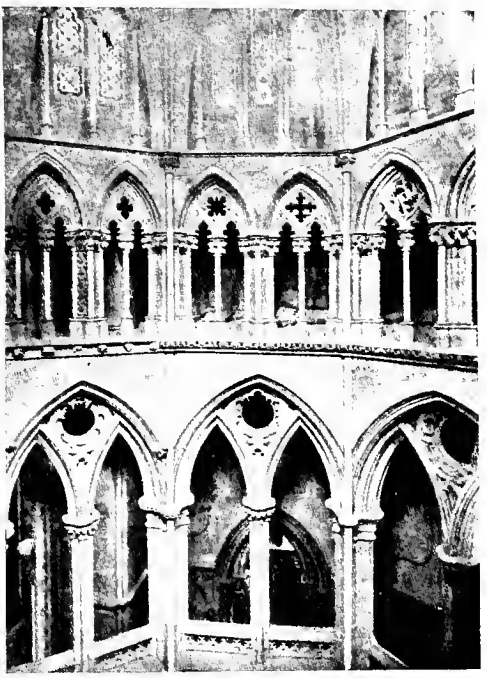


463—Interior of cathedral, Throndjem, looking east. (From Adamy.)

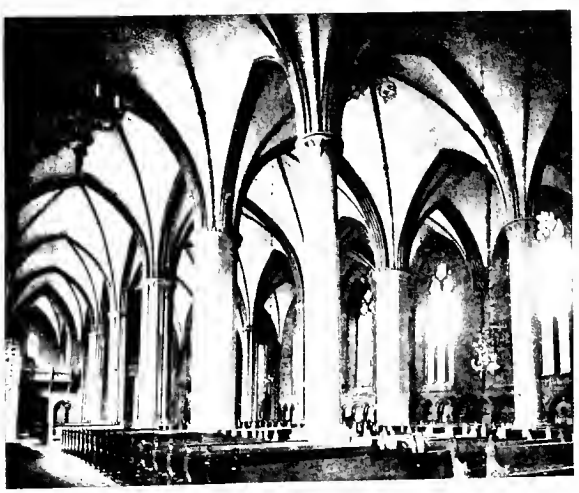
terracotta that was current in those countries, but more usually there was a survival of stonework for details.

Throndjem (Drontheim), the seat of the archbishop of Norway, has a cathedral which combines Romanesque (transept) transition (chapter-house), early English (choir) and developed Gothic (choir, nave). Until its partial destruction in the sixteenth century it was perhaps the only Scandinavian building that could be classed with the larger cathedrals of the rest of Europe. The view of the upper part of the choir in Fig. 463 shows clearly English character in the lancet arcades, round abaci, broad enclosing arch and decorated oculus of

the gallery, and in the decoration and especially the capitals of the triforium with their double row of heavily projecting foliage. Its date is 1248. The plan is eight-sided and therefore rather German than English. The lower part of the choir is more developed, but still English in its arrangement and character. A view of it in Fig. 464 shows a richer ornamentation, but it must be noted also that the aisles are sacrificed to the nave and are less than half its width, a very unusual proportion. Originally there was built, at the close of the thirteenth century, a large three-aisled body against the renovated transept, but this collapsed in the sixteenth century and its reconstruction was only recently begun. To the same period and also to the same early English influence belongs the choir of the cathedral of Stavanger (after 1272), with one enormous window in its square end.



464—Choir in cathedral, Throndjem. (From Michel.)



465—Cathedral of Linkoeping. (From Michel.)

Quite another scheme is illustrated in the cathedral of Linkoeping, which was the second ecclesiastical centre of Norway, after Throndjem. The view given in Fig. 465 shows the body of the church, begun c. 1280 and completed c. 1350, to have followed the German hall plan. In the pic-

ture the two slender columns in the foreground belong to the earliest period and join on to the transept, which is under English influence (c. 1250), as is quite clear from the style of the portal of the south arm.

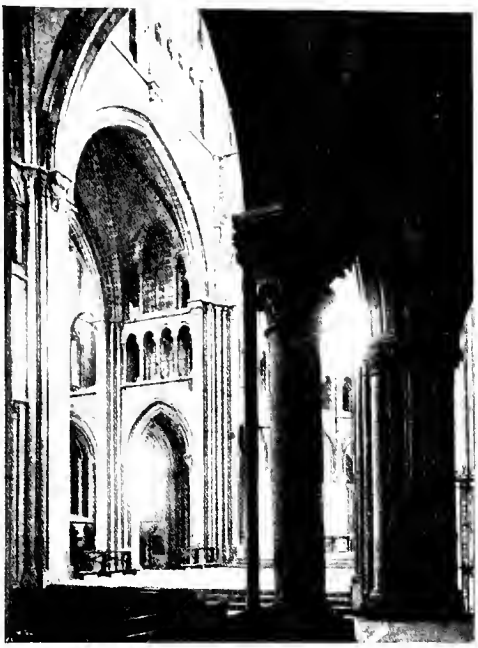
In Denmark the cathedral of Roeskilde is the most interesting work for an understanding of the first stages of transitional work. Its apse and transept are more successful than the heavy nave. In fact, the apse is not unlike what the original apse of Notre Dame, in Paris, must have been, with deambulatory but no chapels. Above the deambulatory is a charming gallery with arcades separated only by granite columns.

It is the custom to include among Gothic works the very special group of churches and other structures of this age built on the island of Gotland, but as they did not get beyond the use of groin vaulting they evidently are outside the pale, until we reach the works of the close of the fourteenth century at Wisby, built by the Dominicans and Franciscans, which show that they imported architectural ideas from Italy, as in St. Nicholas, and especially St. Catharine with its octagonal piers, wide arcades and high side-aisles, though some critics see here and elsewhere German influence.

There are but few examples of late Gothic in Scandinavia. At Wadstena, in Sweden, is the best instance of a curious Scandinavian adaptation of a Germanic type in its Flamboyant form. It is a hall church of rectangular plan, built of limestone, with three aisles equal not only in height but in width, and with a choir at each end, one for the priests and one for the nuns, both of them square ending. The plain octagonal piers support broad low vaults with lierne and tierceron ribbing. It was built from 1388 to 1430 for the new order of nuns of St. Birgitta and set a model for other churches as the order spread through Scandinavia. These churches were of uniform simplicity, not to say meagreness, in contrast to usual late Gothic work, except in North Germany and the Baltic. In fact, outside Sweden, churches of this type were usually built of brick, as at Maribo in Denmark and Reval in the Baltic.

SWITZERLAND.—There is no reason for treating Switzerland as an architectural unit. She was as international in the Gothic period as she is now. Germanic influences prevailed in the section adjacent to Germany; French, especially Burgundian, influences in the region near the western border, and in fact in most of the larger centres.

Her splendid quarries favored the development of the best Gothic forms. The churches of Lausanne and Geneva may be taken as typical examples of the dependence on Burgundy. The interior of the cathedral of Lausanne, seen at the transept in Fig. 466, has the strength and solidity of this school at its prime in the thirteenth century. The lantern has a columnar gallery like the nave, and to the sexpartite vaulting responds the alternation of columns and piers as supports. The cathedral at Chur, quite heavy and with Romanesque details, though largely of the thirteenth century, has signs of Lombard influence. In the cathedral of Basel there is a mixture of German and Lombard traits in the nave and ambulatory. Berne cathedral, with its enormous and heavy tower over the porch, is frankly German, of the Esslingen-Ulm type, though less symmetrical. This most important of Swiss churches was built between 1421 and 1575. Its interior is also Germanic; with trellised vaulting on slender clustered piers without capitals. The cathedral at Fribourg also belongs to the German school.



466—Cathedral of Lausanne. (From Michel.)

THE LEVANT.—It is only as a matter of curiosity that we will mention a group of Gothic monuments in the Levant. They were due to the conquests of the Crusaders and are not to be found chiefly in Palestine itself, because by the time Gothic forms began to travel Palestine was being gradually reconquered by the Mohammedans. Cyprus, conquered by the Crusaders in 1191, became the centre of a Christian kingdom. Its metropolitan church, the cathedral of Nicosia, is largely a work of the thirteenth century modelled at first on Notre Dame, with columns for its supports in choir and nave, and without triforium. At Famagusta we find a duplicate of the Sainte Chapelle in the chapel

of St. George. The fourteenth century saw even greater prosperity. Its masterpiece, the cathedral of Famagusta, founded in 1308, has a simple basilical plan similar to that of Saint Urbain at Troyes, and a façade resembling S. Nicaise of Reims, with one enormous pointed window instead of a rose-window. Further resemblances in the façade to the cathedral of Reims increase the probability, suggested by M. Enlart, that the architect of this cathedral was a Frenchman from Champagne. It is certain that pure French Gothic dominated in the island at this time. Numerous examples prove it. In Famagusta itself the church of S. Peter and S. Paul, and the Greek cathedral are local imitations. But English influence is evident in the interesting buildings of the Abbey of Lapais.

Russia.—The domination of Byzantine art in Russia prevented the advent of Gothic not, perhaps, on account of its artistic, but because of its religious power. The Orthodox Greek church could not accept the style of the Latin church. Only on the Baltic did the neighborhood of Scandinavia and Germany produce a few exceptions. In any case, Finland was at that time not a part of Russia, but of Scandinavia. Then, there are the Polish provinces, at that time part of independent Poland and ecclesiastically part of the Latin church. Here, also, Gothic obtained a foothold. But, in neither case is there any development of especial interest, merely secondary works derived from the schools of North Germany, at Riga, Wenden, Reval, and Dorpat in the Baltic provinces. Abo in Finland, Wilna and Krakau in Poland, have transitional and Gothic buildings of plain North German style, principally of brick. The cathedral of Riga, before its reconstruction in the fifteenth century, seems to have been in a plain transitional style of the thirteenth century. The church of the Order of Teutonic Knights at Wenden, though commenced as late as 1283, is still transitional. The ruined cathedral of Dorpat was the most important church in the province.

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